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(54) Title: GENES, COMPOSITIONS, KITS, AND METHOD FOR IDENTIFICATION, ASSESSMENT, PREVENTION AND THERAPY OF OVARIAN CANCER

(57) Abstract: The invention relates to compositions, kits, and methods for detecting, characterizing, preventing, and treating human ovarian cancers. A variety of novel markers are provided, wherein changes in the levels of expression of one or more of the markers is correlated with the presence of ovarian cancer.

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COMPOSITIONS, KITS, AND METHODS FOR
IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF
OVARIAN CANCER

5 RELATED APPLICATIONS

The present application claims priority to U.S. provisional patent application serial no. 60/191,031 filed on March 21, 2000, U.S. provisional patent application serial no. 60/207,124, filed on May 25, 2000, U.S. provisional patent application serial no. 60/211,940, filed on June 15, 2000, U.S. provisional patent application serial no. 10 60/216,820, filed on July 7, 2000, U.S. provisional patent application serial no. 60/220,661, filed on July 25, 2000, and U.S. provisional patent application serial no. 60/257,672, filed on December 21, 2000, all of which are expressly incorporated by reference.

15 FIELD OF THE INVENTION

The field of the invention is ovarian cancer, including diagnosis, characterization, management, and therapy of ovarian cancer.

BACKGROUND OF THE INVENTION

20 Ovarian cancer is responsible for significant morbidity and mortality in populations around the world. Ovarian cancer is classified, on the basis of clinical and pathological features, in three groups, namely epithelial ovarian cancer (EOC; >90% of ovarian cancer in Western countries), germ cell tumors (*circa* 2-3% of ovarian cancer), and stromal ovarian cancer (*circa* 5% of ovarian cancer; Ozols *et al.*, 1997, *Cancer* 25 *Principles and Practice of Oncology*, 5th ed., DeVita *et al.*, Eds. pp. 1502). Relative to EOC, germ cell tumors and stromal ovarian cancers are more easily detected and treated at an early stage, translating into higher/better survival rates for patients afflicted with these two types of ovarian cancer.

There are numerous types of ovarian tumors, some of which are benign, and 30 others of which are malignant. Treatment (including non-treatment) options and predictions of patient outcome depend on accurate classification of the ovarian cancer. Ovarian cancers are named according to the type of cells from which the cancer is

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derived and whether the ovarian cancer is benign or malignant. Recognized histological tumor types include, for example, serous, mucinous, endometrioid, and clear cell tumors. In addition, ovarian cancers are classified according to recognized grade and stage scales.

5 In grade I, the tumor tissue is well differentiated from normal ovarian tissue. In grade II, tumor tissue is moderately well differentiated. In grade III, the tumor tissue is poorly differentiated from normal tissue, and this grade correlates with a less favorable prognosis than grades I and II. Stage I is generally confined within the capsule surrounding one (stage IA) or both (stage IB) ovaries, although in some stage I (*i.e.* stage IC) cancers, malignant cells may be detected in ascites, in peritoneal rinse fluid, or
10 on the surface of the ovaries. Stage II involves extension or metastasis of the tumor from one or both ovaries to other pelvic structures. In stage IIA, the tumor extends or has metastasized to the uterus, the fallopian tubes, or both. Stage IIB involves extension of the tumor to the pelvis. Stage IIC is stage IIA or IIB in which malignant cells may be
15 detected in ascites, in peritoneal rinse fluid, or on the surface of the ovaries. In stage III, the tumor comprises at least one malignant extension to the small bowel or the omentum, has formed extrapelvic peritoneal implants of microscopic (stage IIIA) or macroscopic (< 2 centimeter diameter, stage IIIB; > 2 centimeter diameter, stage IIIC) size, or has metastasized to a retroperitoneal or inguinal lymph node (an alternate
20 indicator of stage IIIC). In stage IV, distant (*i.e.* non-peritoneal) metastases of the tumor can be detected.

The durations of the various stages of ovarian cancer are not presently known, but are believed to be at least about a year each (Richart *et al.*, 1969, *Am. J. Obstet. Gynecol.* 105:386). Prognosis declines with increasing stage designation. For example,
25 5-year survival rates for patients diagnosed with stage I, II, III, and IV ovarian cancer are 80%, 57%, 25%, and 8%, respectively.

Despite being the third most prevalent gynecological cancer, ovarian cancer is the leading cause of death among those afflicted with gynecological cancers. The disproportionate mortality of ovarian cancer is attributable to a substantial absence of
30 symptoms among those afflicted with early-stage ovarian cancer and to difficulty diagnosing ovarian cancer at an early stage. Patients afflicted with ovarian cancer most often present with non-specific complaints, such as abnormal vaginal bleeding,

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gastrointestinal symptoms, urinary tract symptoms, lower abdominal pain, and generalized abdominal distension. These patients rarely present with paraneoplastic symptoms or with symptoms which clearly indicate their affliction. Presently, less than about 40% of patients afflicted with ovarian cancer present with stage I or stage II.

- 5 Management of ovarian cancer would be significantly enhanced if the disease could be detected at an earlier stage, when treatments are much more generally efficacious.

Ovarian cancer may be diagnosed, in part, by collecting a routine medical history from a patient and by performing physical examination, x-ray examination, and chemical and hematological studies on the patient. Hematological tests which may be
10 indicative of ovarian cancer in a patient include analyses of serum levels of proteins designated CA125 and DF3 and plasma levels of lysophosphatidic acid (LPA). Palpation of the ovaries and ultrasound techniques (particularly including endovaginal ultrasound and color Doppler flow ultrasound techniques) can aid detection of ovarian tumors and differentiation of ovarian cancer from benign ovarian cysts. However, a
15 definitive diagnosis of ovarian cancer typically requires performing exploratory laparotomy of the patient.

Potential tests for the detection of ovarian cancer (*e.g.*, screening, reflex or monitoring) may be characterized by a number of factors. The "sensitivity" of an assay refers to the probability that the test will yield a positive result in an individual afflicted
20 with ovarian cancer. The "specificity" of an assay refers to the probability that the test will yield a negative result in an individual not afflicted with ovarian cancer. The "positive predictive value" (PPV) of an assay is the ratio of true positive results (*i.e.* positive assay results for patients afflicted with ovarian cancer) to all positive results (*i.e.* positive assay results for patients afflicted with ovarian cancer + positive assay
25 results for patients not afflicted with ovarian cancer). It has been estimated that in order for an assay to be an appropriate population-wide screening tool for ovarian cancer the assay must have a PPV of at least about 10% (Rosenthal *et al.*, 1998, *Sem. Oncol.* 25:315-325). It would thus be desirable for a screening assay for detecting ovarian cancer in patients to have a high sensitivity and a high PPV. Monitoring and reflex tests
30 would also require appropriate specifications.

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Owing to the cost, limited sensitivity, and limited specificity of known methods of detecting ovarian cancer, screening is not presently performed for the general population. In addition, the need to perform laparotomy in order to diagnose ovarian cancer in patients who screen positive for indications of ovarian cancer limits the desirability of population-wide screening, such that a PPV even greater than 10% would be desirable.

Prior use of serum CA125 level as a diagnostic marker for ovarian cancer indicated that this method exhibited insufficient specificity for use as a general screening method. Use of a refined algorithm for interpreting CA125 levels in serial retrospective samples obtained from patients improved the specificity of the method without shifting detection of ovarian cancer to an earlier stage (Skakes, 1995, *Cancer* 76:2004). Screening for LPA to detect gynecological cancers including ovarian cancer exhibited a sensitivity of about 96% and a specificity of about 89%. However, CA125-based screening methods and LPA-based screening methods are hampered by the presence of CA125 and LPA, respectively, in the serum of patients afflicted with conditions other than ovarian cancer. For example, serum CA125 levels are known to be associated with menstruation, pregnancy, gastrointestinal and hepatic conditions such as colitis and cirrhosis, pericarditis, renal disease, and various non-ovarian malignancies. Serum LPA is known, for example, to be affected by the presence of non-ovarian gynecological malignancies. A screening method having a greater specificity for ovarian cancer than the current screening methods for CA125 and LPA could provide a population-wide screening for early stage ovarian cancer.

Presently greater than about 60% of ovarian cancers diagnosed in patients are stage III or stage IV cancers. Treatment at these stages is largely limited to cytoreductive surgery (when feasible) and chemotherapy, both of which aim to slow the spread and development of metastasized tumor. Substantially all late stage ovarian cancer patients currently undergo combination chemotherapy as primary treatment, usually a combination of a platinum compound and a taxane. Median survival for responding patients is about one year. Combination chemotherapy involving agents such as doxorubicin, cyclophosphamide, cisplatin, hexamethylmelamine, paclitaxel, and methotrexate may improve survival rates in these groups, relative to single-agent therapies. Various recently-developed chemotherapeutic agents and treatment regimens

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have also demonstrated usefulness for treatment of advanced ovarian cancer. For example, use of the topoisomerase I inhibitor topectan, use of amifostine to minimize chemotherapeutic side effects, and use of intraperitoneal chemotherapy for patients having peritoneally implanted tumors have demonstrated at least limited utility.

- 5 Presently, however, the 5-year survival rate for patients afflicted with stage III ovarian cancer is 25%, and the survival rate for patients afflicted with stage IV ovarian cancer is 8%.

In summary, the earlier ovarian cancer is detected, the aggressiveness of therapeutic intervention and the side effects associated with therapeutic intervention are
10 minimized. More importantly, the earlier the cancer is detected, the survival rate and quality of life of ovarian cancer patients is enhanced. Thus, a pressing need exists for methods of detecting ovarian cancer as early as possible. There also exists a need for methods of detecting recurrence of ovarian cancer as well as methods for predicting and monitoring the efficacy of treatment. The present invention satisfies these needs.

15

SUMMARY OF THE INVENTION

The invention relates to novel genes associated with ovarian cancer as well as methods of assessing whether a patient is afflicted with ovarian cancer. This method comprises the step of comparing the level of expression of a marker in a patient sample,
20 wherein the marker is listed in Tables 1-2, and the normal level of expression of the marker in a control, *e.g.*, a sample from a patient without ovarian cancer. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer. Preferably, a protein corresponding to the marker is a secreted protein. Alternatively, the marker
25 can correspond to a protein having an extracellular portion, to one which is normally expressed in ovarian tissue at a detectable level, or both.

In one method, the marker(s) are preferably selected such that the positive predictive value of the method is at least about 10%. Also preferred are embodiments of the method wherein the marker is over- or under-expressed by at least two-fold in at
30 least about 20% of stage I ovarian cancer patients, stage II ovarian cancer patients, stage III ovarian cancer patients, stage IV ovarian cancer patients, grade I ovarian cancer patients, grade II ovarian cancer patients, grade III ovarian cancer patients, epithelial

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ovarian cancer patients, stromal ovarian cancer patients, germ cell ovarian cancer patients, malignant ovarian cancer patients, benign ovarian patients, serous neoplasm ovarian cancer patients, mucinous neoplasm ovarian cancer patients, endometrioid neoplasm ovarian cancer patients and/or clear cell neoplasm ovarian cancer patients.

5 In one embodiment of the methods of the present invention, the patient sample is an ovary-associated body fluid. Such fluids include, for example, blood fluids, lymph, ascitic fluids, gynecological fluids, cystic fluids, urine, and fluids collected by peritoneal rinsing. In another embodiment, the sample comprises cells obtained from the patient. In this embodiment, the cells may be found in a fluid selected from the group consisting
10 of a fluid collected by peritoneal rinsing, a fluid collected by uterine rinsing, a uterine fluid, a uterine exudate, a pleural fluid, and an ovarian exudate. In another embodiment, the patient sample is *in vivo*.

 In accordance with the methods of the present invention, the level of expression of the marker in a sample can be assessed, for example, by detecting the presence in the
15 sample of :

- a protein corresponding to the marker or fragment of the protein (*e.g.* using a reagent, such as an antibody, an antibody derivative, or an antibody fragment, which binds specifically with the protein)
- a transcribed polynucleotide (*e.g.* an mRNA or a cDNA), or fragment
20 thereof, having at least a portion with which the marker is substantially homologous (*e.g.* by contacting a mixture of transcribed polynucleotides obtained from the sample with a substrate having one or more of the markers listed in Tables 1-2 fixed thereto at selected positions)
- a transcribed polynucleotide or fragment thereof, wherein the
25 polynucleotide anneals with the marker under stringent hybridization conditions.
- a metabolite which is produced directly (*i.e.*, catalyzed) or indirectly by a protein corresponding to the marker

 The methods of the present invention are particularly useful for patients with an
30 identified pelvic mass or symptoms associated with ovarian cancer. The methods of the present invention can also be of particular use with patients having an enhanced risk of developing ovarian cancer (*e.g.*, patients having a familial history of ovarian cancer,

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patients identified as having a mutant oncogene, and patients at least about 50 years of age). The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of an ovarian cancer patient (*e.g.* the efficacy of chemotherapy).

5 The methods of the present invention may be performed using a plurality (*e.g.* 2, 3, 5, or 10 or more) of markers. According to a method involving a plurality of markers, the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-2 is compared with the normal level of expression of each of the plurality of markers in samples of the same type obtained from
10 control humans not afflicted with ovarian cancer. The markers of Tables 1-2 may also be used in combination with known ovarian cancer markers in the methods of the present invention.

In a preferred method of assessing whether a patient is afflicted with ovarian cancer (*e.g.*, new detection ("screening"), detection of recurrence, reflex testing), the
15 method comprises comparing:

- a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-2, and
- b) the normal level of expression of the marker in a control non-ovarian cancer sample.

20 A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer.

The methods of the present invention further include a method of assessing the efficacy of a test compound for inhibiting ovarian cancer in a patient. This method
25 comprises comparing:

- a) expression of a marker in a first sample obtained from the patient and maintained in the presence of the test compound, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
- 30 b) expression of the marker in a second sample obtained from the patient and maintained in the absence of the test compound.

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A significant difference between the level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is efficacious for inhibiting ovarian cancer in the patient. For example, the first and second samples can be portions of a single sample obtained from the patient or portions of pooled samples obtained from the patient.

The invention further relates to a method of assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient. This method comprises comparing:

- a) expression of a marker in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
- b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy.

A significant difference between the level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting ovarian cancer in the patient.

It will be appreciated that in these methods the "therapy" may be any traditional therapy for treating ovarian cancer including, but not limited to, chemotherapy, radiation therapy and surgical removal of tissue, *e.g.*, an ovarian tumor. Thus, the methods of the invention may be used to evaluate a patient before, during and after thereapy, for example, to evaluate the reduction in tumor burden.

The present invention therefore further comprises a method for monitoring the progression of ovarian cancer in a patient, the method comprising:

- a) detecting in a patient sample at a first time point, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2;
- b) repeating step a) at a subsequent time point in time; and
- c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of ovarian cancer in the patient.

The invention also includes a method of selecting a composition for inhibiting ovarian cancer in a patient. This method comprises the steps of:

- a) obtaining a sample comprising cancer cells from the patient;

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b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker listed in Tables 1-2 in each of the aliquots; and

5 d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

In addition, the invention includes a method of inhibiting ovarian cancer in a patient. This method comprises the steps of:

10 a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of a marker listed in Tables 1-2 in each of the aliquots; and

15 d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

The invention also includes a kit for assessing whether a patient is afflicted with ovarian cancer. This kit comprises reagents for assessing expression of a marker listed
20 in Tables 1-2.

In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting an ovarian cancer in a patient. The kit comprises a reagent for assessing expression of a marker listed in Tables 1-2, and may also comprise a plurality of compounds.

25 In another aspect, the invention relates to a kit for assessing the presence of ovarian cancer cells. This kit comprises an antibody, wherein the antibody binds specifically with a protein corresponding to a marker listed in Tables 1-2. The kit may also comprise a plurality of antibodies, wherein the plurality binds specifically with a protein corresponding to a different marker listed in Tables 1-2.

30 The invention also includes a kit for assessing the presence of ovarian cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide corresponding to a marker listed in Tables 1-2. The kit

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may also comprise a plurality of probes, wherein each of the probes binds specifically with a transcribed polynucleotide corresponding to a different marker listed in Tables 1-2.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer. The method comprises isolating a protein corresponding to a marker listed in Tables 1-2, immunizing a mammal using the isolated protein, isolating splenocytes from the immunized mammal, fusing the isolated splenocytes with an immortalized cell line to form hybridomas, and screening individual hybridomas for production of an antibody which specifically binds with the protein to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the ovarian carcinogenic potential of a test compound. This method comprises the steps of:

- a) maintaining separate aliquots of ovarian cells in the presence and absence of the test compound; and
- b) comparing expression of a marker in each of the aliquots.

The marker is selected from those listed in Tables 1-2. A significantly altered level of expression of the marker in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses ovarian carcinogenic potential.

Additionally, the invention includes a kit for assessing the ovarian carcinogenic potential of a test compound. The kit comprises ovarian cells and a reagent for assessing expression of a marker in each of the aliquots. The marker is selected from those listed in Tables 1-2.

The invention further relates to a method of treating a patient afflicted with ovarian cancer or at risk of developing ovarian cancer. This method comprises enhancing expression of a marker listed in Tables 1-2 or providing to cells of the patient a protein corresponding to a marker listed in Tables 1-2, wherein the marker is underexpressed in patients afflicted with ovarian cancer. The protein can be provided to the cells, for example, by providing a vector comprising a polynucleotide encoding the protein to the cells.

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The invention includes another method of treating a patient afflicted with ovarian cancer or at risk of developing ovarian cancer. This method comprises inhibiting expression or overexpression of a marker listed in Tables 1-2 by, *e.g.*, providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide
5 corresponding to a marker listed in Tables 1-2, wherein the marker is overexpressed in patients afflicted with ovarian cancer.

It will be appreciated that the methods and kits of the present invention may also include known cancer markers including known ovarian cancer markers. It will further be appreciated that the methods and kits may be used to identify cancers other than
10 ovarian cancer.

DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered genes associated with the cancerous state of ovarian cells. It has been discovered that the level of expression of individual
15 genes, also referred to as markers, and combinations of these genes, correlates with the presence of ovarian cancer in a patient. Methods are provided for detecting the presence of ovarian cancer in a sample, the absence of ovarian cancer in a sample, the stage of an ovarian cancer, and with other characteristics of ovarian cancer that are relevant to prevention, diagnosis, characterization, and therapy of ovarian cancer in a patient.

20

Definitions

As used herein, each of the following terms has the meaning associated with it in this section.

The articles "a" and "an" are used herein to refer to one or to more than one (*i.e.*
25 to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

A "marker" is a naturally-occurring polymer corresponding to at least one of the novel nucleic acids listed in Tables 1-2. For example, markers include, without limitation, sense and anti-sense strands of genomic DNA (*i.e.* including any introns
30 occurring therein), RNA generated by transcription of genomic DNA (*i.e.* prior to splicing), RNA generated by splicing of RNA transcribed from genomic DNA, and proteins generated by translation of spliced RNA (*i.e.* including proteins both before and

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after cleavage of normally cleaved regions such as transmembrane signal sequences). As used herein, "marker" may also include a cDNA made by reverse transcription of an RNA generated by transcription of genomic DNA (including spliced RNA).

The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker of the invention. Probes can be either synthesized by one skilled in the art, or derived from appropriate biological preparations. For purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can be utilized as probes include, but are not limited to, RNA, DNA, proteins, antibodies, and organic monomers.

An "ovary-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through ovarian cells or into which cells or proteins shed from ovarian cells *e.g.* ovarian epithelium, are capable of passing. Exemplary ovary-associated body fluids include blood fluids, lymph, ascites, gynecological fluids, cystic fluid, urine, and fluids collected by peritoneal rinsing.

The "normal" level of expression of a marker is the level of expression of the marker in ovarian cells of a patient, *e.g.* a human, not afflicted with ovarian cancer.

"Over-expression" and "under-expression" of a marker refer to expression of the marker of a patient at a greater or lesser level, respectively, than normal level of expression of the marker (*e.g.* at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid sequence which is required for expression of a gene product operably linked to the promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

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An "inducible" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

5 A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

10 A "transcribed polynucleotide" is a polynucleotide (*e.g.* an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a genomic DNA corresponding to a marker of the invention and normal post-transcriptional processing (*e.g.* splicing), if any, of the transcript.

"Complementary" refers to the broad concept of sequence complementarity
15 between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil. Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of
20 base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is capable of base pairing with a residue of the second region. Preferably, the first region
25 comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion. More preferably, all nucleotide residues of the first
30 portion are capable of base pairing with nucleotide residues in the second portion.

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"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands. When a nucleotide residue position in both regions is occupied by the same nucleotide residue, then the regions are homologous at that position. A first region is homologous to a second region if at least one nucleotide residue position of each region is occupied by the same residue. Homology between two regions is expressed in terms of the proportion of nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-ATTGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide residue positions of each of the portions are occupied by the same nucleotide residue.

A marker is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such the substrate can be rinsed with a fluid (*e.g.* standard saline citrate, pH 7.4) without a substantial fraction of the marker dissociating from the substrate.

As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature (*e.g.* encodes a natural protein).

Expression of a marker in a patient is "significantly" higher or lower than the normal level of expression of a marker if the level of expression of the marker is greater or less, respectively, than the normal level by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker in the patient can be considered "significantly" higher or lower than the normal level of expression if the level of expression is at least about two, and preferably at least about three, four, or five times, higher or lower, respectively, than the normal level of expression of the marker.

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Ovarian cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, ovarian cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

A kit is any manufacture (*e.g.* a package or container) comprising at least one
5 reagent, *e.g.* a probe, for specifically detecting a marker of the invention, the manufacture being promoted, distributed, or sold as a unit for performing the methods of the present invention.

Description

10 The present invention is based, in part, on identification of novel markers which are over-expressed in ovarian cancer cells as compared to their expression in normal (*i.e.* non- cancerous) ovarian cells. The markers of the invention correspond to DNA, RNA, and polypeptide molecules which can be detected in one or both of normal and
15 ovarian cells is herein correlated with the cancerous state of the tissue. The invention thus includes compositions, kits, and methods for assessing the cancerous state of ovarian cells (*e.g.* cells obtained from a human, cultured human cells, archived or preserved human cells and *in vivo* cells).

The compositions, kits, and methods of the invention have the following uses,
20 among others:

- 1) assessing whether a patient is afflicted with ovarian cancer;
- 2) assessing the stage of ovarian cancer in a human patient;
- 3) assessing the grade of ovarian cancer in a patient;
- 4) assessing the benign or malignant nature of ovarian cancer in a patient;
- 25 5) assessing the histological type of neoplasm (*e.g.* serous, mucinous, endometroid, or clear cell neoplasm) associated with ovarian cancer in a patient;
- 6) making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer;
- 30 7) assessing the presence of ovarian cancer cells;
- 8) assessing the efficacy of one or more test compounds for inhibiting ovarian cancer in a patient;

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- 9) assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient;
- 10) monitoring the progression of ovarian cancer in a patient;
- 11) selecting a composition or therapy for inhibiting ovarian cancer in a patient;
- 12) treating a patient afflicted with ovarian cancer;
- 13) inhibiting ovarian cancer in a patient;
- 14) assessing the ovarian carcinogenic potential of a test compound; and
- 15) inhibiting an ovarian cancer in a patient at risk for developing ovarian cancer.

The invention thus includes a method of assessing whether a patient is afflicted with ovarian cancer. This method comprises comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a control, *e.g.*, a non-ovarian cancer sample. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer. The marker is selected from the group consisting of the markers listed in Tables 1-2.

The polynucleotides set forth in Tables 1-2 represent previously unidentified nucleotide sequences. These nucleotide sequences were identified through subtracted library experiments described herein. Also provided by this invention are polynucleotides that correspond to the polynucleotides of Tables 1-2. In one embodiment, these polynucleotides are obtained by identification of a larger fragment or full-length coding sequence of these polynucleotides. Gene delivery vehicles, host cells, compositions and databases (all described herein) containing these polynucleotides are also provided by this invention.

Any marker or combination of markers listed in Tables 1-2, as well as any known markers in combination with the markers set forth in Tables 1-2, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use markers for which the difference between the level of expression of the marker in ovarian cancer cells and the level of expression of the same marker in normal ovarian

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cells is as great as possible. Although this difference can be as small as the limit of detection of the method for assessing expression of the marker, it is preferred that the difference be at least greater than the standard error of the assessment method, and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-,
5 500-, 1000-fold or greater.

It is recognized that certain markers correspond to proteins which are secreted from ovarian cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein
10 corresponding to each of these markers can be detected in an ovary-associated body fluid sample, which may be more easily collected from a human patient than a tissue biopsy sample. In addition, preferred *in vivo* techniques for detection of a protein corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein. For example, the antibody can be labeled with a
15 radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

It is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (*e.g.* a cell of an ovarian cell
20 line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (*e.g.* using a labeled antibody which binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About 8×10^5 293T cells are
25 incubated at 37°C in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) CO₂, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an expression vector encoding the protein and 10 microliters of LipofectAMINE™
30 (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain

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methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424- 54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-³⁵STM reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% CO₂ atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150
5 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

Examples of ovary-associated body fluids include blood fluids (*e.g.* whole blood, blood serum, blood having platelets removed therefrom, etc.), lymph, ascitic fluids,
10 gynecological fluids (*e.g.* ovarian, fallopian, and uterine secretions, menses, vaginal douching fluids, fluids used to rinse cervical cell samples, etc.), cystic fluid, urine, and fluids collected by peritoneal rinsing (*e.g.* fluids applied and collected during laparoscopy or fluids instilled into and withdrawn from the peritoneal cavity of a human patient). In these embodiments, the level of expression of the marker can be assessed by
15 assessing the amount (*e.g.* absolute amount or concentration) of the marker in an ovary-associated body fluid obtained from a patient. The fluid can, of course, be subjected to a variety of well-known post-collection preparative and storage techniques (*e.g.* storage, freezing, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker in the fluid.

20 Many ovary-associated body fluids (*i.e.* usually excluding urine) can have ovarian cells, *e.g.* ovarian epithelium, therein, particularly when the ovarian cells are cancerous, and, more particularly, when the ovarian cancer is metastasizing. Cell-containing fluids which can contain ovarian cancer cells include, but are not limited to, peritoneal ascites, fluids collected by peritoneal rinsing, fluids collected by uterine
25 rinsing, uterine fluids such as uterine exudate and menses, pleural fluid, and ovarian exudates. Thus, the compositions, kits, and methods of the invention can be used to detect expression of markers corresponding to proteins having at least one portion which is displayed on the surface of cells which express it. Examples of such proteins are indicated in the Tables herein. Although not every protein having at least one cell-
30 surface portion is indicated in the Tables, it is a simple matter for the skilled artisan to determine whether the protein corresponding to any particular marker comprises a cell-surface protein. For example, immunological methods may be used to detect such

proteins on whole cells, or well known computer-based sequence analysis methods (*e.g.* the SIGNALP program; Nielsen *et al.*, 1997, *Protein Engineering* 10:1-6) may be used to predict the presence of at least one extracellular domain (*i.e.* including both secreted proteins and proteins having at least one cell-surface domain). Expression of a marker
5 corresponding to a protein having at least one portion which is displayed on the surface of a cell which expresses it may be detected without necessarily lysing the cell (*e.g.* using a labeled antibody which binds specifically with a cell-surface domain of the protein).

Expression of a marker of the invention may be assessed by any of a wide
10 variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods, protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods.

15 In a preferred embodiment, expression of a marker is assessed using an antibody (*e.g.* a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzyme-labeled antibody), an antibody derivative (*e.g.* an antibody conjugated with a substrate or with the protein or ligand of a protein-ligand pair {*e.g.* biotin-streptavidin}), or an antibody fragment (*e.g.* a single-chain antibody, an isolated antibody hypervariable domain, etc.)
20 which binds specifically with a protein corresponding to the marker, such as the protein encoded by the open reading frame corresponding to the marker or such a protein which has undergone all or a portion of its normal post-translational modification.

In another preferred embodiment, expression of a marker is assessed by preparing mRNA/cDNA (*i.e.* a transcribed polynucleotide) from cells in a patient
25 sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which is a complement of a polynucleotide comprising the marker, and fragments thereof. cDNA can, optionally, be amplified using any of a variety of polymerase chain reaction methods prior to hybridization with the reference polynucleotide; preferably, it is not amplified. Expression of one or more markers can likewise be detected using
30 quantitative PCR to assess the level of expression of the marker(s). Alternatively, any of the many known methods of detecting mutations or variants (*e.g.* single nucleotide

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polymorphisms, deletions, etc.) of a marker of the invention may be used to detect occurrence of a marker in a patient.

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide
5 complementary to or homologous with at least a portion (*e.g.* at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more nucleotide residues) of a marker of the invention. If polynucleotides complementary to or homologous with are differentially detectable on the substrate (*e.g.* detectable using different chromophores or fluorophores, or fixed to different selected positions), then the levels of expression of a plurality of markers can
10 be assessed simultaneously using a single substrate (*e.g.* a "gene chip" microarray of polynucleotides fixed at selected positions). When a method of assessing marker expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of
15 a difference in expression levels of one or more markers of the invention, it is preferable that the level of expression of the marker is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal ovarian cells and cancerous ovarian cells.

It is understood that by routine screening of additional patient samples using one
20 or more of the markers of the invention, it will be realized that certain of the markers are over- or under-expressed in cancers of various types, including specific ovarian cancers, as well as other cancers such as breast cancer, cervical cancer, etc. For example, it will be confirmed that some of the markers of the invention are over- or under-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of ovarian cancer.
25 Furthermore, it will be confirmed that certain of the markers of the invention are associated with ovarian cancer of various stages (*i.e.* stage I, II, III, and IV ovarian cancers, as well as subclassifications IA, IB, IC, IIA, IIB, IIC, IIIA, IIIB, and IIIC, using the FIGO Stage Grouping system for primary carcinoma of the ovary; 1987, *Am. J. Obstet. Gynecol.* 156:236), of various histologic subtypes (*e.g.* serous, mucinous,
30 endometrioid, and clear cell subtypes, as well as subclassifications and alternate classifications adenocarcinoma, papillary adenocarcinoma, papillary cystadenocarcinoma, surface papillary carcinoma, malignant adenofibroma,

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cystadenofibroma, adenocarcinoma, cystadenocarcinoma, adenoacanthoma, endometrioid stromal sarcoma, mesodermal (Müllerian) mixed tumor, mesonephroid tumor, malignant carcinoma, Brenner tumor, mixed epithelial tumor, and undifferentiated carcinoma, using the WHO/FIGO system for classification of malignant
5 ovarian tumors; Scully, *Atlas of Tumor Pathology*, 3d series, Washington DC), and various grades (*i.e.* grade I {well differentiated} , grade II {moderately well differentiated}, and grade III {poorly differentiated from surrounding normal tissue}). In addition, as a greater number of patient samples are assessed for expression of the markers of the invention and the outcomes of the individual patients from whom the
10 samples were obtained are correlated, it will also be confirmed that altered expression of certain of the markers of the invention are strongly correlated with malignant cancers and that altered expression of other markers of the invention are strongly correlated with benign tumors. The compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological type, and benign/malignant
15 nature of ovarian cancer in patients. In addition, these compositions, kits, and methods can be used to detect and differentiate epithelial, stromal, and germ cell ovarian cancers.

When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, and benign/malignant nature of ovarian cancer in a patient, it is preferred that the marker or panel of markers
20 of the invention is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with an ovarian cancer of the corresponding stage, grade, histological type, or benign/malignant nature. Preferably, the marker or panel of markers of the invention is selected such that a PPV of greater than about 10% is obtained for the
25 general population (more preferably coupled with an assay specificity greater than 99.5%).

When a plurality of markers of the invention are used in the compositions, kits, and methods of the invention, the level of expression of each marker in a patient sample can be compared with the normal level of expression of each of the plurality of markers
30 in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker) or in individual reaction mixtures corresponding to one or more of the markers. In one embodiment, a

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significantly enhanced level of expression of more than one of the plurality of markers in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. In another embodiment, a significantly lower level of expression in the sample of each of the plurality of markers, relative to the

5 corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. In yet another embodiment, a significantly enhanced level of expression of one or more marks and a significantly lower level of expression of one or more markers in a sample relative to the corresponding normal levels, is an indication that the patient is afflicted with ovarian cancer. When a plurality of markers is used, it is preferred that 2,

10 3, 4, 5, 8, 10, 12, 15, 20, 30, or 50 or more individual markers be used, wherein fewer markers are preferred.

In order to maximize the sensitivity of the compositions, kits, and methods of the invention (*i.e.* by interference attributable to cells of non-ovarian origin in a patient sample), it is preferable that the marker of the invention used therein be a marker which

15 has a restricted tissue distribution, *e.g.*, normally not expressed in a non-epithelial tissue, and more preferably a marker which is normally not expressed in a non-ovarian tissue.

Only a small number of markers are known to be associated with ovarian cancers (*e.g.* *AKT2*, *Ki-RAS*, *ERBB2*, *c-MYC*, *RB1*, and *TP53*; Lynch, *supra*). These markers are not, of course, included among the markers of the invention, although they may be used

20 together with one or more markers of the invention in a panel of markers, for example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the markers of the invention, use of those which correspond to proteins which resemble known proteins

25 encoded by known oncogenes and tumor suppressor genes, and those which correspond to proteins which resemble growth factors, proteases, and protein kinases are preferred.

Known oncogenes and tumor suppressor genes include, for example, *abl*, *abr*, *akt2*, *apc*, *bcl2 α* , *bcl2 β* , *bcl3*, *bcr*, *brca1*, *brca2*, *cbl*, *ccnd1*, *cdc42*, *cdk4*, *crk- II*, *csf1r/fms*, *dbl*, *dcc*, *dpc4/smad4*, *e-cad*, *e2f1/rbap*, *egfr/erbB-1*, *elk1*, *elk3*, *eph*, *erg*, *ets1*, *ets2*, *fer*, *fgr/src2*, *flil/ergb2*, *fos*, *fps/fes*, *fra1*, *fra2*, *fyn*, *hck*, *hek*, *her2/erbB- 2/neu*, *her3/erbB-3*, *her4/erbB-4*, *hras1*, *hst2*, *hstf1*, *igfbp2*, *ink4a*, *ink4b*, *int2/fgf3*, *jun*, *junb*, *jund*, *kip2*, *kit*, *kras2a*, *kras2b*, *lck*, *lyn*, *mas*, *max*, *mcc*, *mdm2*, *met*, *mlh1*, *mmp10*, *mos*,

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msh2, msh3, msh6, myb, myba, mybb, myc, mycl1, mycn, nfl, nf2, nme2, nras, p53, pdgfb, phb, pim1, pms1, pms2, ptc, pten, raf1, rap1a, rbl, rel, ret, ros1, ski, src1, tall, tgfb2, tgfb3, tgfb3, thral, thrb, tiam1, timp3, tjpl, tp53, trk, vav, vhl, vil2, waf1, wnt1, wnt2, wt1, and yes1 (Hesketh, 1997, In: *The Oncogene and Tumour Suppressor Gene Facts Book*, 2nd Ed., Academic Press; Fishel *et al.*, 1994, *Science* 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, platelet-derived growth factor beta (simian sarcoma viral {v-sis} oncogene homolog), thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1 (somatomedia C), hepatoma-derived growth factor, amphiregulin (schwannoma-derived growth factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF), teratocarcinoma-derived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-derived factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth factor (vascular endothelial growth factor-related protein), transforming growth factor alpha, transforming growth factor beta 1 and its precursors, transforming growth factor beta 2 and its precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor 9 (glia-activating factor), pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12 (macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metalloproteinase 1,

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cysteine-rich metalloprotease (disintegrin) and its precursors, subtilisin-like protease Pc8 and its precursors, chymotrypsin, snake venom-like protease, cathepsin L, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type
 5 plasminogen activator.

Known protein kinases include DAP kinase, serine/threonine protein kinases NIK, PK428, Krs-2, SAK, and EMK, interferon-inducible double stranded RNA dependent protein kinase, FAST kinase, AIM1, IPL1-like midbody-associated protein kinase-1, NIMA-like protein kinase 1 (NLK1), the cyclin-dependent kinases (cdk1-10),
 10 checkpoint kinase Chk1, Nek3 protein kinase, BMK1 beta kinase, Clk1, Clk2, Clk3, extracellular signal-regulated kinases 1, 3, and 6, cdc28 protein kinase 1, cdc28 protein kinase 2, pLK, Myt1, c-Jun N-terminal kinase 2, Cam kinase 1, the MAP kinases, insulin-stimulated protein kinase 1, beta-adrenergic receptor kinase 2, ribosomal protein S6 kinase, kinase suppressor of ras-1 (KSR1), putative serine/threonine protein kinase
 15 Prk, PkB kinase, cAMP-dependent protein kinase, cGMP-dependent protein kinase, type II cGMP-dependent protein kinase, protein kinases Dyrk2, Dyrk3, and Dyrk4, Rho-associated coiled-coil containing protein kinase p160ROCK, protein tyrosine kinase t-Ror1, Ste20-related kinases, cell adhesion kinase beta, protein kinase 3, stress-activated protein kinase 4, protein kinase Zpk, serine kinase hPAK65, dual specificity mitogen-
 20 activated protein kinases 1 and 2, casein kinase I gamma 2, p21-activated protein kinase Pak1, lipid-activated protein kinase PRK2, focal adhesion kinase, dual-specificity tyrosine-phosphorylation regulated kinase, myosin light chain kinase, serine kinases SRPK2, TESK1, and VRK2, B lymphocyte serine/threonine protein kinase, stress-activated protein kinases JNK1 and JNK2, phosphorylase kinase, protein tyrosine kinase
 25 Tec, Jak2 kinase, protein kinase Ndr, MEK kinase 3, SHB adaptor protein (a Src homology 2 protein), agammaglobulinaemia protein-tyrosine kinase (Atk), protein kinase ATR, guanylate kinase 1, thrombopoietin receptor and its precursors, DAG kinase epsilon, and kinases encoded by oncogenes or viral oncogenes such as v-fgr (Gardner-Rasheed), v-abl (Abelson murine leukemia viral oncogene homolog 1), v-arg
 30 (Abelson murine leukemia viral oncogene homolog, Abelson-related gene), v-fes and v-fps (feline sarcoma viral oncogene and Fujinami avian sarcoma viral oncogene homologs), proto-oncogene *c-cot*, oncogene *pim-1*, and oncogene *mas1*.

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It is recognized that the compositions, kits, and methods of the invention will be of particular utility to patients having an enhanced risk of developing ovarian cancer and their medical advisors. Patients recognized as having an enhanced risk of developing ovarian cancer include, for example, patients having a familial history of ovarian cancer, 5 patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients of advancing age (*i.e.* women older than about 50 or 60 years).

The level of expression of a marker in normal (*i.e.* non-cancerous) human ovarian tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker in a 10 portion of ovarian cells which appears to be non-cancerous and by comparing this normal level of expression with the level of expression in a portion of the ovarian cells which is suspected of being cancerous. For example, when laparoscopy or other medical procedure, reveals the presence of a lump on one portion of a patient's ovary, but not on another portion of the same ovary or on the other ovary, the normal level of 15 expression of a marker may be assessed using one or both of the non-affected ovary and a non-affected portion of the affected ovary, and this normal level of expression may be compared with the level of expression of the same marker in an affected portion (*i.e.* the lump) of the affected ovary. Alternately, and particularly as further information becomes available as a result of routine performance of the methods described herein, 20 population-average values for normal expression of the markers of the invention may be used. In other embodiments, the 'normal' level of expression of a marker may be determined by assessing expression of the marker in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of ovarian cancer in the patient, from archived patient samples, and the 25 like.

The invention includes compositions, kits, and methods for assessing the presence of ovarian cancer cells in a sample (*e.g.* an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and 30 methods are adapted for use with samples other than patient samples. For example, when the sample to be used is a parafinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the

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kits of the invention, or the methods used to assess levels of marker expression in the sample. Such methods are well known in the art and within the skill of the ordinary artisan.

The invention includes a kit for assessing the presence of ovarian cancer cells
5 (e.g. in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a nucleic acid or polypeptide corresponding to a marker of the invention. Suitable reagents for binding with a polypeptide corresponding to a marker of the invention include antibodies, antibody derivatives, antibody fragments, and the like. Suitable reagents for binding with a
10 nucleic acid (e.g. a genomic DNA, an mRNA, a spliced mRNA, a cDNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon probes, and the like.

15 The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (e.g. SSC buffer) suitable for annealing complementary nucleic acids or for binding an antibody with a protein with which it specifically binds, one or more sample compartments, an instructional material which describes performance of a method of the
20 invention, a sample of normal ovarian cells, a sample of ovarian cancer cells, and the like.

The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether patient is afflicted with an ovarian cancer. In this method, a protein corresponding to a marker of the invention is isolated
25 (e.g. by purification from a cell in which it is expressed or by transcription and translation of a nucleic acid encoding the protein *in vivo* or *in vitro* using known methods). A vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein, so that the vertebrate
30 exhibits a robust immune response to the protein. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this

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manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein. The invention also includes hybridomas made by this method and antibodies made using such hybridomas.

5 The invention also includes a method of assessing the efficacy of a test compound for inhibiting ovarian cancer cells. As described above, differences in the level of expression of the markers of the invention correlate with the cancerous state of ovarian cells. Although it is recognized that changes in the levels of expression of certain of the markers of the invention likely result from the cancerous state of ovarian
10 cells, it is likewise recognized that changes in the levels of expression of other of the markers of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit an ovarian cancer in a patient will cause the level of expression of one or more of the markers of the invention to change to a level nearer the normal level of expression for that marker (*i.e.* the level of expression for the marker
15 in non-cancerous ovarian cells).

 This method thus comprises comparing expression of a marker in a first ovarian cell sample and maintained in the presence of the test compound and expression of the marker in a second ovarian cell sample and maintained in the absence of the test compound. A significant alteration in the level of expression of a marker listed in
20 Tables 1-2 is an indication that the test compound inhibits ovarian cancer. The ovarian cell samples may, for example, be aliquots of a single sample of normal ovarian cells obtained from a patient, pooled samples of normal ovarian cells obtained from a patient, cells of a normal ovarian cell line, aliquots of a single sample of ovarian cancer cells obtained from a patient, pooled samples of ovarian cancer cells obtained from a patient,
25 cells of an ovarian cancer cell line, or the like. In one embodiment, the samples are ovarian cancer cells obtained from a patient and a plurality of compounds known to be effective for inhibiting various ovarian cancers are tested in order to identify the compound which is likely to best inhibit the ovarian cancer in the patient.

 This method may likewise be used to assess the efficacy of a therapy for
30 inhibiting ovarian cancer in a patient. In this method, the level of expression of one or more markers of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the

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efficacy of test compounds, if the therapy induces a significant alteration in the level of expression of a marker listed in Tables 1-2 then the therapy is efficacious for inhibiting ovarian cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely
5 to be efficacious for inhibiting ovarian cancer in the patient.

As described herein, ovarian cancer in patients is associated with an alteration in the level of expression of one or more markers listed in Tables 1-2. While, as discussed above, some of these changes in expression level result from occurrence of the ovarian cancer, others of these changes induce, maintain, and promote the cancerous
10 state of ovarian cancer cells. Thus, ovarian cancer characterized by an increase in the level of expression of one or more markers listed in either or both of Tables 1-2 can be inhibited by inhibiting expression of those markers.

Expression of a marker listed in Tables 1-2 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided
15 to the ovarian cancer cells in order to inhibit transcription, translation, or both, of the marker(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein corresponding to the marker(s). Using
20 the methods described herein, a variety of molecules, particularly including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker(s) in the ovarian cancer cells of the patient.

25 Expression of a marker listed in Tables 1-2 can be enhanced in a number of ways generally known in the art. For example, a polynucleotide encoding the marker and operably linked with an appropriate promoter/regulator region can be provided to ovarian cancer cells of the patient in order to induce enhanced expression of the protein (and mRNA) corresponding to the marker therein. Alternatively, if the protein is
30 capable of crossing the cell membrane, inserting itself in the cell membrane, or is normally a secreted protein, then expression of the protein can be enhanced by providing

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the protein (*e.g.* directly or by way of the bloodstream or another ovary-associated fluid) to ovarian cancer cells in the patient.

As described above, the cancerous state of human ovarian cells is correlated with changes in the levels of expression of the markers of the invention. The invention includes a method for assessing the human ovarian cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human ovarian cells in the presence and absence of the test compound. Expression of a marker of the invention in each of the aliquots is compared. A significant alteration in the level of expression of a marker listed in Tables 1-2 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human ovarian cell carcinogenic potential. The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the relevant markers, by comparing the number of markers for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following subsections.

I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to novel isolated nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention or a portion of such a polypeptide. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention, and fragments of such nucleic acid molecules, *e.g.*, those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA) and RNA molecules (*e.g.*, mRNA) and analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

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An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule is free of sequences (preferably protein-encoding sequences) which naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention can be isolated using standard molecular biology techniques and the sequence information in the database records described herein. Using all or a portion of such nucleic acid sequences, nucleic acid molecules of the invention can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, ed., *Molecular Cloning: A Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the invention can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule which has a nucleotide sequence complementary to the nucleotide sequence of a nucleic acid corresponding to a marker of the invention or to the nucleotide sequence of a nucleic acid encoding a protein which corresponds to a marker of the invention. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently

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complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

Moreover, a nucleic acid molecule of the invention can comprise only a portion of a nucleic acid sequence, wherein the full length nucleic acid sequence comprises a
5 marker of the invention or which encodes a polypeptide corresponding to a marker of the invention. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about 15, more preferably about
10 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences corresponding to one or more markers of the invention. The probe comprises a label group attached thereto, *e.g.*, a
15 radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which mis-express the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, *e.g.*, detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

20 The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker of the invention, and thus encode the same protein.

It will be appreciated by those skilled in the art that DNA sequence
25 polymorphisms that lead to changes in the amino acid sequence can exist within a population (*e.g.*, the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist
30 that may affect the overall expression level of that gene (*e.g.*, by affecting regulation or degradation).

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As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide corresponding to a marker of the invention. Such natural allelic variations can typically result in 1-5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety of individuals. Any and all such nucleotide variations and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a nucleic acid corresponding to a marker of the invention or to a nucleic acid encoding a protein corresponding to a marker of the invention. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.*, *Nature Biotechnology*, Volume 14, 1996 August:1675-1680; Breslauer, *et al.*, *Proc. Natl. Acad. Sci. USA*, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.*, *Nucleic Acids Research*, Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.*, *BioTechniques*,

Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for activity and thus would be likely targets for alteration. Alternatively, amino acid residues that are conserved among the homologs of various species (*e.g.*, murine and human) may be essential for activity and thus would not be likely targets for alteration.

Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins which correspond to the markers of the invention, yet retain biological activity. In one embodiment, such a protein has an amino acid sequence that is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins which correspond to the markers of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein. Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an

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amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker of the invention or complementary to an mRNA sequence corresponding to a marker of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine

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substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxymethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker of the invention to thereby inhibit expression of the marker, *e.g.*, by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into an ovary-associated body fluid. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules

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to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

An antisense nucleic acid molecule of the invention can be an α -anomeric nucleic acid molecule. An α -anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual α -units, the strands run parallel to each other (Gaultier *et al.*, 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-O-methylribonucleotide (Inoue *et al.*, 1987, *Nucleic Acids Res.* 15:6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.*, 1987, *FEBS Lett.* 215:327-330).

The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, *Nature* 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding a polypeptide corresponding to a marker of the invention can be designed based upon the nucleotide sequence of a cDNA corresponding to the marker. For example, a derivative of a *Tetrahymena* L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).

The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (*e.g.*, the promoter and/or enhancer) to form triple helical structures that prevent transcription of the gene in target cells. See generally Helene

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(1991) *Anticancer Drug Des.* 6(6):569-84; Helene (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.*, 1996, *Bioorganic & Medicinal Chemistry* 4(1): 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudo peptide backbone and only the four natural nucleobases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996), *supra*; Perry-O'Keefe *et al.* (1996) *Proc. Natl. Acad. Sci. USA* 93:14670-675.

PNAs can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or antigene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup (1996), *supra*; or as probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.*, 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the nucleobases, and orientation (Hyrup,

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1996, *supra*). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), *supra*, and Finn *et al.* (1996) *Nucleic Acids Res.* 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds
5 such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag *et al.*, 1989, *Nucleic Acids Res.* 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.*, 1996, *Nucleic Acids Res.* 24(17):3357-63). Alternatively, chimeric molecules can be
10 synthesized with a 5' DNA segment and a 3' PNA segment (Peterser *et al.*, 1975, *Bioorganic Med. Chem. Lett.* 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci. USA* 84:648-652;
15 PCT Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.*, 1988, *Bio/Techniques* 6:958-976) or intercalating agents (see, *e.g.*, Zon, 1988, *Pharm. Res.* 5:539-549). To
20 this end, the oligonucleotide can be conjugated to another molecule, *e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the
25 molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions
30 are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with

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one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

II. Isolated Proteins and Antibodies

- 5 One aspect of the invention pertains to isolated proteins which correspond to individual markers of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide corresponding to a marker of the invention. In one embodiment, the native polypeptide corresponding to a marker can be isolated from cells or tissue
- 10 sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides corresponding to a marker of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide corresponding to a marker of the invention can be synthesized chemically using standard peptide synthesis techniques.
- 15 An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the
- 20 protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is
- 25 also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other chemicals which are involved in the synthesis of the protein. Accordingly such
- 30 preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

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Biologically active portions of a polypeptide corresponding to a marker of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein corresponding to the marker, which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides are encoded by the nucleotide sequences of Tables 1-2. Other useful proteins are substantially identical (*e.g.*, at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or 99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (*e.g.*, gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (*i.e.*, % identity = # of identical positions/total # of positions (*e.g.*, overlapping positions) $\times 100$). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) *Proc. Natl. Acad. Sci. USA* 87:2264-2268, modified as in Karlin and Altschul (1993) *Proc. Natl. Acad. Sci. USA* 90:5873-5877. Such an

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algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, *et al.* (1990) *J. Mol. Biol.* 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul *et al.* (1997) *Nucleic Acids Res.* 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (*e.g.*, XBLAST and NBLAST) can be used. See <http://www.ncbi.nlm.nih.gov>. Another preferred, non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, (1988) *CABIOS* 4:11-17. Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988) *Proc. Natl. Acad. Sci. USA* 85:2444-2448. When using the FASTA algorithm for comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a *k*-tuple value of 2.

The percent identity between two sequences can be determined using techniques similar to those described above, with or without allowing gaps. In calculating percent identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide corresponding to a marker of the invention operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide corresponding to the marker). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each

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other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

One useful fusion protein is a GST fusion protein in which a polypeptide corresponding to a marker of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide corresponding to a marker of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla, California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook *et al.*, *supra*) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein in which all or part of a polypeptide corresponding to a marker of the invention is fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

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Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor
5 primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, *e.g.*, Ausubel *et al.*, *supra*). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an
10 expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein
15 during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one
20 embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed, and the signal sequence is subsequently or concurrently cleaved. The protein can then
25 be readily purified from the extracellular medium by art recognized methods. Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

The present invention also pertains to variants of the polypeptides corresponding to individual markers of the invention. Such variants have an altered amino acid
30 sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally

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occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display). There are a variety of methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, *e.g.*, Narang, 1983, *Tetrahedron* 39:3; Itakura *et al.*, 1984, *Annu. Rev. Biochem.* 53:323; Itakura *et al.*, 1984, *Science* 198:1056; Ike *et al.*, 1983 *Nucleic Acid Res.* 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide corresponding to a marker of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA which can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be

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derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high through-put analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors, transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA* 89:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327- 331).

An isolated polypeptide corresponding to a marker of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length polypeptide or protein can be used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific immune complex with a marker of the invention to which the protein corresponds. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, *e.g.*, hydrophilic regions. Hydrophobicity sequence analysis, hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can

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further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

Accordingly, another aspect of the invention pertains to antibodies directed against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, *e.g.*, an epitope of a polypeptide of the invention. A molecule which specifically binds to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and F(ab')₂ fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression of a polypeptide of the invention. In such a manner, the only human epitope or epitopes recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or isolated from the subject (*e.g.*, from the blood or serum of the subject) and further

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purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (*e.g.*, partially purified) or purified by, *e.g.*, affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of

5 the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, *i.e.*, one that is

10 substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the

15 sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, *e.g.*, when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to

20 prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature* 256:495-497, the human B cell hybridoma technique (see Kozbor *et al.*, 1983, *Immunol. Today* 4:72), the EBV-hybridoma technique (see Cole *et al.*, pp. 77-96 In *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing

25 hybridomas is well known (see generally *Current Protocols in Immunology*, Coligan *et al.* ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, *e.g.*, using a standard ELISA assay.

30 Alternative to preparing monoclonal antibody-secreting hybridomas, a monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (*e.g.*, an

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antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are commercially available (*e.g.*, the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene *SurfZAP Phage Display Kit*, Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology* 9:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas* 3:81-85; Huse *et al.* (1989) *Science* 246:1275-1281; Griffiths *et al.* (1993) *EMBO J.* 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. A chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region. (See, *e.g.*, Cabilly *et al.*, U.S. Patent No. 4,816,567; and Boss *et al.*, U.S. Patent No. 4,816,397, which are incorporated herein by reference in their entirety.) Humanized antibodies are antibody molecules from non-human species having one or more complementarily determining regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, *e.g.*, Queen, U.S. Patent No. 5,585,089, which is incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671; European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:3439-3443; Liu *et al.* (1987) *J. Immunol.* 139:3521-3526; Sun *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:214-218; Nishimura *et al.* (1987) *Cancer Res.* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-

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449; and Shaw *et al.* (1988) *J. Natl. Cancer Inst.* 80:1553-1559; Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *Bio/Techniques* 4:214; U.S. Patent 5,225,539; Jones *et al.* (1986) *Nature* 321:552-525; Verhoeyan *et al.* (1988) *Science* 239:1534; and Beidler *et al.* (1988) *J. Immunol.* 141:4053-4060.

5 Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having an ovarian cancer. Such antibodies can be produced, for example, using transgenic mice which are incapable of expressing endogenous immunoglobulin heavy and light chains
10 genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, *e.g.*, all or a portion of a polypeptide corresponding to a marker of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B
15 cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar (1995) *Int. Rev. Immunol.* 13:65-93). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies
20 and protocols for producing such antibodies, see, *e.g.*, U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent 5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

25 Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, *e.g.*, a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers *et al.*, 1994, *Bio/technology* 12:899-903).

30 An antibody directed against a polypeptide corresponding to a marker of the invention (*e.g.*, a monoclonal antibody) can be used to isolate the polypeptide by standard techniques, such as affinity chromatography or immunoprecipitation.

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Moreover, such an antibody can be used to detect the marker (*e.g.*, in a cellular lysate or cell supernatant) in order to evaluate the level and pattern of expression of the marker. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids (*e.g.* in an ovary-associated body fluid) as part of a clinical testing
5 procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline
10 phosphatase, β -galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent
15 materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include ^{125}I , ^{131}I , ^{35}S or ^3H .

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include
20 taxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, teniposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites
25 (*e.g.*, methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (*e.g.*, mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclophosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (*e.g.*, daunorubicin (formerly daunomycin) and
30 doxorubicin), antibiotics (*e.g.*, dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (*e.g.*, vincristine and vinblastine).

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The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin
5 such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor, .alpha.-interferon, .beta.-interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophase colony stimulating factor ("GM-CSF"),
10 granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, *e.g.*, Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in *Monoclonal Antibodies And Cancer Therapy*, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug
15 Delivery", in *Controlled Drug Delivery* (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in *Monoclonal Antibodies '84: Biological And Clinical Applications*, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in
20 *Monoclonal Antibodies For Cancer Detection And Therapy*, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", *Immunol. Rev.*, 62:119-58 (1982).

Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

25 Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a
30 fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the

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ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent

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identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention,
5 or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a
10 cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

15 Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

20 The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a
25 pharmaceutically acceptable carrier.

Still another aspect of the invention is a method of making an antibody that specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immungen comprises an amino acid sequence selected from the group consisting of the amino acid
30 sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence

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which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid

- 5 molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C.

- After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is
- 10 recombinantly produced using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody-producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

15

III. Recombinant Expression Vectors and Host Cells

- Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide corresponding to a marker of the invention (or a portion of such a polypeptide). As used herein, the term "vector"
- 20 refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which
- 25 they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are
- 30 operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*,

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replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This
5 means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression
10 of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Methods in Enzymology: Gene Expression Technology* vol.185,
15 Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the
20 host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for
25 expression of a polypeptide corresponding to a marker of the invention in prokaryotic (*e.g.*, *E. coli*) or eukaryotic cells (*e.g.*, insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7
30 polymerase.

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Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion
5 vectors typically serve three purposes: 1) to increase expression of recombinant protein; 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein
10 from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST),
15 maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target gene expression from the pTrc vector relies on host RNA
20 polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 gn1 gene under the transcriptional control of the lacUV 5 promoter.

25 One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression
30 vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of

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nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector.

Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.*, 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.*, 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector.

Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*, Sf 9 cells) include the pAc series (Smith *et al.*, 1983, *Mol. Cell Biol.* 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2PC (Kaufman *et al.*, 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra*.

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (*e.g.*, tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.*, 1987, *Genes Dev.* 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, *Adv. Immunol.* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, *EMBO J.* 8:729-733) and immunoglobulins (Banerji *et al.*, 1983, *Cell* 33:729-740; Queen and Baltimore, 1983, *Cell* 33:741-748), neuron-specific promoters (*e.g.*, the neurofilament promoter; Byrne and Ruddle, 1989, *Proc. Natl. Acad. Sci. USA* 86:5473-5477), pancreas-specific promoters (Edlund *et al.*, 1985, *Science* 230:912-916), and mammary gland-specific promoters (*e.g.*, milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally-

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regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, *Science* 249:374-379) and the α -fetoprotein promoter (Camper and Tilghman, 1989, *Genes Dev.* 3:537-546).

The invention further provides a recombinant expression vector comprising a
5 DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense
10 orientation can be chosen which direct the continuous expression of the antisense RNA molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic
15 acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, 1986, *Trends in Genetics*, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant
20 expression vector of the invention has been introduced. The terms "host cell" and "recombinant host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be
25 identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (*e.g.*, *E. coli*) or eukaryotic cell (*e.g.*, insect cells, yeast or mammalian cells).

Vector DNA can be introduced into prokaryotic or eukaryotic cells via
30 conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium

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phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (*e.g.*, for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide corresponding to a marker of the invention. Accordingly, the invention further provides methods for producing a polypeptide corresponding to a marker of the invention using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the marker is produced. In another embodiment, the method further comprises isolating the marker polypeptide from the medium or the host cell.

The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide corresponding to a marker of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker protein of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide corresponding to a marker of the invention sequences have been altered. Such animals are useful for studying the function and/or activity of the polypeptide corresponding to the marker and for identifying and/or evaluating modulators of polypeptide activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more

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preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal
5 develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and
10 an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide corresponding to a marker of the invention into the male pronuclei of a fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing
15 the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via embryo manipulation
20 and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S. Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified
25 based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals carrying other transgenes.

30 To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a gene encoding a polypeptide corresponding to a marker of the invention into which a deletion, addition or substitution has been introduced to

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thereby alter, *e.g.*, functionally disrupt, the gene. In a preferred embodiment, the vector is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (*i.e.*, no longer encodes a functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon

5 homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur

10 between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, *e.g.*, Thomas and Capecchi, 1987, *Cell* 51:503 for a description of homologous

15 recombination vectors). The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced gene has homologously recombined with the endogenous gene are selected (see, *e.g.*, Li *et al.*, 1992, *Cell* 69:915). The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse) to form aggregation chimeras (see, *e.g.*, Bradley, *Teratocarcinomas and*

20 *Embryonic Stem Cells: A Practical Approach*, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline

25 transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

In another embodiment, transgenic non-human animals can be produced which

30 contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, *e.g.*, Lakso *et al.* (1992) *Proc.*

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Natl. Acad. Sci. USA 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.*, 1991, *Science* 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a
5 selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, *e.g.*, by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be
10 produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

IV. Pharmaceutical Compositions

The nucleic acid molecules, polypeptides, and antibodies (also referred to herein
15 as "active compounds") corresponding to a marker of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media,
20 coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be
25 incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide
30 or nucleic acid corresponding to a marker of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically

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acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.*, candidate or test compounds or agents (*e.g.*, peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (*e.g.*, stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (*e.g.*, peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation but which nevertheless remain bioactive; see, *e.g.*, Zuckermann *et al.*, 1994, *J. Med. Chem.* 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc. Natl. Acad. Sci. U.S.A.* 90:6909; Erb *et al.* (1994) *Proc. Natl. Acad. Sci. USA* 91:11422; Zuckermann *et al.* (1994). *J. Med. Chem.* 37:2678; Cho *et al.* (1993) *Science* 261:1303; Carrell *et al.* (1994) *Angew. Chem.*

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Int. Ed. Engl. 33:2059; Carell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2061; and in Gallop *et al.* (1994) *J. Med. Chem.* 37:1233.

Libraries of compounds may be presented in solution (*e.g.*, Houghten, 1992, *Biotechniques* 13:412-421), or on beads (Lam, 1991, *Nature* 354:82-84), chips (Fodor, 1993, *Nature* 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull *et al.*, 1992, *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and Smith, 1990, *Science* 249:386-390; Devlin, 1990, *Science* 249:404-406; Cwirla *et al.*, 1990, *Proc. Natl. Acad. Sci.* 87:6378-6382; Felici, 1991, *J. Mol. Biol.* 222:301-310; Ladner, *supra.*).

10 In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of a marker or biologically active portion thereof. In another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that
15 binding of the compound to the marker can be determined by detecting the labeled marker compound in a complex. For example, compounds (*e.g.*, marker substrates) can be labeled with ¹²⁵I, ³⁵S, ¹⁴C, or ³H, either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively,
20 assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product.

In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker or a biologically active portion
25 thereof. In all likelihood, the marker can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker "substrate".

One necessary embodiment of the invention in order to facilitate such screening
30 is the use of the marker to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay

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(see, *e.g.*, U.S. Patent No. 5,283,317; Zervos *et al*, 1993, *Cell* 72:223-232; Madura *et al*, 1993, *J. Biol. Chem.* 268:12046-12054; Bartel *et al*, 1993, *Biotechniques* 14:920-924; Iwabuchi *et al*, 1993 *Oncogene* 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker (binding partners) and,

5 therefore, are possibly involved in the natural function of the marker. Such marker binding partners are also likely to be involved in the propagation of signals by the marker or downstream elements of a marker-mediated signaling pathway. Alternatively, such marker binding partners may also be found to be inhibitors of the marker.

The two-hybrid system is based on the modular nature of most transcription
10 factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (*e.g.*, GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is
15 fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo*, forming a marker-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (*e.g.*, LacZ) which is operably linked to a transcriptional regulatory site responsive to
20 the transcription factor. Expression of the reporter gene can be readily detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (*e.g.*, affect either positively
25 or negatively) interactions between a marker and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use
30 in this embodiment is an ovarian cancer marker identified herein, the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

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The basic principle of the assay systems used to identify compounds that interfere with the interaction between the marker and its binding partner involves preparing a reaction mixture containing the marker and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the marker and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the marker and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker and its binding partner.

The assay for compounds that interfere with the interaction of the marker with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the markers and the binding partners (*e.g.*, by competition) can be identified by conducting the reaction in the presence of the test substance, *i.e.*, by adding the test substance to the reaction mixture prior to or simultaneously with the marker and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, *e.g.*, compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

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In a heterogeneous assay system, either the marker or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number
5 of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating the solid surface with a solution of the marker or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

10 In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker fusion proteins or glutathione-S-transferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then
15 combined with the test compound or the test compound and either the non-adsorbed marker or its binding partner, and the mixture incubated under conditions conducive to complex formation (*e.g.*, physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described
20 above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker or a marker binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated
25 marker protein or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in advance and stored.

30 In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (*e.g.*, by washing)

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and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the non-immobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; *e.g.*, using a labeled antibody specific for the initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, *e.g.*, a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used. This is typically a reaction, analogous to those mentioned above, which is conducted in a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds modulate (inhibit or enhance) complex formation and which disrupt preformed complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., *Trends Biochem Sci* 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the complex from

the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, 1998, *J Mol. Recognit.* 11:141-148; Hage and Tweed, 1997, *J. Chromatogr. B. Biomed. Sci. Appl.*, 699:499-525). Gel electrophoresis
5 may also be employed to separate complexed molecules from unbound species (see, *e.g.*, Ausubel *et al* (eds.), In: *Current Protocols in Molecular Biology*, J. Wiley & Sons, New York, 1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are
10 typically preferred, but conditions appropriate to the particular interactants will be well known to one skilled in the art. Immunoprecipitation is another common technique utilized for the isolation of a protein-protein complex from solution (see, *e.g.*, Ausubel *et al* (eds.), In: *Current Protocols in Molecular Biology*, J. Wiley & Sons, New York, 1999). In this technique, all proteins binding to an antibody specific to one of the
15 binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific proteolysis event or other technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing
20 antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information about the ability of the compound to modulate interactions between the marker and its binding partner.

25 Also within the scope of the present invention are methods for direct detection of interactions between the marker and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, *e.g.*, Lakowicz *et al*, U.S. Patent No. 5,631,169; Stavrianopoulos *et al*, U.S. Patent No.
30 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (*e.g.*, marker or test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (*e.g.*,

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marker or test compound), which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein, corresponding to a marker in the cell, is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker expression based on this comparison. For example, when expression of marker mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of marker mRNA or protein expression. Conversely, when expression of marker mRNA or protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker mRNA or protein expression. The level of marker mRNA or protein expression in the cells can be determined by methods described herein for detecting marker mRNA or protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a

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marker protein can be further confirmed *in vivo*, *e.g.*, in a whole animal model for cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (*e.g.*, an marker modulating agent, an antisense marker nucleic acid molecule, an marker-specific antibody, or an marker-binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or sample being treated, further depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 500 milligrams per kilogram, about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1 microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (*e.g.* a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or

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researcher can, for example, prescribe a relatively low dose at first, subsequently increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, 5 body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree of expression or activity to be modulated.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include 10 parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; 15 antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be 20 enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic 25 water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for 30 example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance

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of the required particle size in the case of dispersion and by the use of surfactants.

Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents,
5 for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active
10 compound (*e.g.*, a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In
15 the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They
20 can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

25 Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a
30 lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

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For administration by inhalation, the compounds are delivered in the form of an aerosol spray from a pressurized container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For
5 transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active
10 compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

15 In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid.
20 Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal antibodies incorporated therein or thereon) can also be used as pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled
25 in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound
30 calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound

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and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50
5 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (*e.g.*, into the ovarian epithelium). A method for
10 lipidation of antibodies is described by Cruikshank *et al.* (1997) *J. Acquired Immune Deficiency Syndromes and Human Retrovirology* 14:193.

The nucleic acid molecules corresponding to a marker of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S.
15 Patent 5,328,470), or by stereotactic injection (see, *e.g.*, Chen *et al.*, 1994, *Proc. Natl. Acad. Sci. USA* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells,
20 *e.g.* retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

25 V. Predictive Medicine

The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trails are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic
30 assays for determining the level of expression of polypeptides or nucleic acids corresponding to one or more markers of the invention, in order to determine whether an individual is at risk of developing ovarian cancer. Such assays can be used for

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prognostic or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

Yet another aspect of the invention pertains to monitoring the influence of agents (e.g., drugs or other compounds administered either to inhibit ovarian cancer or to treat
5 or prevent any other disorder {i.e. in order to understand any ovarian carcinogenic effects that such treatment may have}) on the expression or activity of a marker of the invention in clinical trials. These and other agents are described in further detail in the following sections.

10 A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample involves obtaining a biological sample (e.g. an ovary-associated body fluid) from a test subject and contacting the biological sample with a compound or an agent capable of detecting
15 the polypeptide or nucleic acid (e.g., mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for example, in a biological sample *in vitro* as well as *in vivo*. For example, *in vitro* techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of a polypeptide corresponding to a
20 marker of the invention include enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the polypeptide.
25 For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a marker, and a probe, under appropriate conditions and for a time sufficient to allow the marker and probe to interact and bind,
30 thus forming a complex that can be removed and/or detected in the reaction mixture. These assays can be conducted in a variety of ways.

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For example, one method to conduct such an assay would involve anchoring the marker or probe onto a solid phase support, also referred to as a substrate, and detecting target marker/probe complexes anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed
5 for presence and/or concentration of marker, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.

There are many established methods for anchoring assay components to a solid
10 phase. These include, without limitation, marker or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In
15 certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker or probe belongs. Well-known supports or carriers include, but are not limited to, glass, polystyrene,
20 nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored. After the reaction is complete, uncomplexed components may be removed
25 (*e.g.*, by washing) under conditions such that any complexes formed will remain immobilized upon the solid phase. The detection of marker/probe complexes anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component, can be labeled for the purpose of detection and readout of the assay, either
30 directly or indirectly, with detectable labels discussed herein and which are well-known to one skilled in the art.

It is also possible to directly detect marker/probe complex formation without further manipulation or labeling of either component (marker or probe), for example by utilizing the technique of fluorescence energy transfer (see, for example, Lakowicz *et al.*, U.S. Patent No. 5,631,169; Stavrianopoulos, *et al.*, U.S. Patent No. 4,868,103). A fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a marker can be accomplished without labeling either assay component (probe or marker) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, *e.g.*, Sjolander, S. and Urbaniczky, C., 1991, *Anal. Chem.* 63:2338-2345 and Szabo *et al.*, 1995, *Curr. Opin. Struct. Biol.* 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real time, without labeling any of the interactants (*e.g.*, BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with marker and probe as solutes in a liquid phase. In such an assay, the complexed marker and probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In

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differential centrifugation, marker/probe complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, *Trends Biochem Sci.* 18(8):284-7).

- 5 Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the
- 10 relatively different charge properties of the marker/probe complex as compared to the uncomplexed components may be exploited to differentiate the complex from uncomplexed components, for example through the utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, N.H., 1998, *J. Mol. Recognit.* Winter 11(1-6):141-8; Hage, D.S., and Tweed, S.A. *J Chromatogr B Biomed Sci Appl* 1997 Oct
- 15 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate complexed assay components from unbound components (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or
- 20 charge, for example. In order to maintain the binding interaction during the electrophoretic process, non-denaturing gel matrix materials and conditions in the absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

- In a particular embodiment, the level of mRNA corresponding to the marker can
- 25 be determined both by *in situ* and by *in vitro* formats in a biological sample using methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select
- 30 against the isolation of mRNA can be utilized for the purification of RNA from ovarian cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can

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readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA or genomic DNA encoding a marker of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of an mRNA with the probe indicates that the marker in question is being expressed.

In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the probe(s) are immobilized on a solid surface and the mRNA is contacted with the probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods for use in detecting the level of mRNA encoded by the markers of the present invention.

An alternative method for determining the level of mRNA corresponding to a marker of the present invention in a sample involves the process of nucleic acid amplification, e.g., by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, *Proc. Natl. Acad. Sci. USA*, 88:189-193), self sustained sequence replication (Guatelli *et al.*, 1990, *Proc. Natl. Acad. Sci. USA* 87:1874-1878), transcriptional amplification system (Kwoh *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988, *Bio/Technology* 6:1197), rolling circle replication (Lizardi *et al.*, U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if

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such molecules are present in very low numbers. As used herein, amplification primers are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in
5 length and flank a region from about 50 to 200 nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a nucleic acid molecule comprising the nucleotide sequence flanked by the primers.

For *in situ* methods, mRNA does not need to be isolated from the ovarian cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using
10 known histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA that encodes the marker.

As an alternative to making determinations based on the absolute expression level of the marker, determinations may be based on the normalized expression level of
15 the marker. Expression levels are normalized by correcting the absolute expression level of a marker by comparing its expression to the expression of a gene that is not a marker, *e.g.*, a housekeeping gene that is constitutively expressed. Suitable genes for normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one
20 sample, *e.g.*, a patient sample, to another sample, *e.g.*, a non-ovarian cancer sample, or between samples from different sources.

Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker, the level of expression of the marker is determined for 10 or more samples of normal versus cancer cell isolates,
25 preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger number of samples is determined and this is used as a baseline expression level for the marker. The expression level of the marker determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for
30 that marker. This provides a relative expression level.

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Preferably, the samples used in the baseline determination will be from ovarian cancer or from non-ovarian cancer cells of ovarian tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker assayed
5 is ovarian specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values based on accumulated data. Expression data from ovarian cells provides a means for grading the severity of the ovarian cancer state.

In another embodiment of the present invention, a polypeptide corresponding to
10 a marker is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide corresponding to a marker of the invention, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or F(ab')₂) can be used. The term "labeled", with regard to the probe or antibody, is intended to
15 encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be
20 detected with fluorescently labeled streptavidin.

Proteins from ovarian cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New
25 York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot analysis and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can
30 readily adapt known protein/antibody detection methods for use in determining whether ovarian cells express a marker of the present invention.

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In one format, antibodies, or antibody fragments, can be used in methods such as Western blots or immunofluorescence techniques to detect the expressed proteins. In such uses, it is generally preferable to immobilize either the antibody or proteins on a solid support. Suitable solid phase supports or carriers include any support capable of
5 binding an antigen or an antibody. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody or antigen, and will be able to adapt such support for use with the present invention. For
10 example, protein isolated from ovarian cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase support can then be washed with the buffer a second time to remove unbound antibody. The amount of bound label on the solid
15 support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample (e.g. an ovary-associated body fluid such as a urine sample). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing ovarian cancer. For
20 example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide corresponding to a marker of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (e.g., an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits
25 can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (e.g., attached to a solid support) which binds to a polypeptide corresponding to a marker of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

30 For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, e.g., a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide corresponding to a marker of the invention or (2)

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a pair of primers useful for amplifying a nucleic acid molecule corresponding to a marker of the invention. The kit can also comprise, *e.g.*, a buffering agent, a preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (*e.g.*, an enzyme or a substrate). The kit can
5 also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

10 B. Pharmacogenomics

Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker of the invention can be administered to individuals to treat (prophylactically or therapeutically) ovarian cancer in the patient. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype
15 and that individual's response to a foreign compound or drug) of the individual may be considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments
20 based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

25 Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, *e.g.*, Linder (1997) *Clin. Chem.* 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic
30 conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate

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dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker of the invention.

C. Monitoring Clinical Trials

Monitoring the influence of agents (*e.g.*, drug compounds) on the level of expression of a marker of the invention can be applied not only in basic drug screening,

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but also in clinical trials. For example, the effectiveness of an agent to affect marker expression can be monitored in clinical trials of subjects receiving treatment for ovarian cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected markers of the invention in the pre-administration sample; (iii) obtaining one or more post-administration samples from the subject; (iv) detecting the level of expression of the marker(s) in the post-administration samples; (v) comparing the level of expression of the marker(s) in the pre-administration sample with the level of expression of the marker(s) in the post-administration sample or samples; and (vi) altering the administration of the agent to the subject accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker(s) to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker(s) to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

20 D. Electronic Apparatus Readable Media and Arrays

Electronic apparatus readable media comprising a marker of the present invention is also provided. As used herein, "electronic apparatus readable media" refers to any suitable medium for storing, holding or containing data or information that can be read and accessed directly by an electronic apparatus. Such media can include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as compact disc; electronic storage media such as RAM, ROM, EPROM, EEPROM and the like; general hard disks and hybrids of these categories such as magnetic/optical storage media. The medium is adapted or configured for having recorded thereon a marker of the present invention.

30 As used herein, the term "electronic apparatus" is intended to include any suitable computing or processing apparatus or other device configured or adapted for storing data or information. Examples of electronic apparatus suitable for use with the

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present invention include stand-alone computing apparatus; networks, including a local area network (LAN), a wide area network (WAN) Internet, Intranet, and Extranet; electronic appliances such as a personal digital assistants (PDAs), cellular phone, pager and the like; and local and distributed processing systems.

- 5 As used herein, "recorded" refers to a process for storing or encoding information on the electronic apparatus readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on known media to generate manufactures comprising the markers of the present invention.

- A variety of software programs and formats can be used to store the marker
10 information of the present invention on the electronic apparatus readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like, as well as in other
15 forms. Any number of dataprocessor structuring formats (*e.g.*, text file or database) may be employed in order to obtain or create a medium having recorded thereon the the markers of the present invention.

- By providing the markers of the invention in readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one
20 skilled in the art can use the nucleotide or amino acid sequences of the present invention in readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

- 25 The present invention therefore provides a medium for holding instructions for performing a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer, wherein the method comprises the steps of determining the presence or absence of a marker and based on the presence or absence of the marker, determining whether the subject has ovarian cancer or a pre-disposition to ovarian
30 cancer and/or recommending a particular treatment for ovarian cancer or pre-ovarian cancer condition.

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The present invention further provides in an electronic system and/or in a network, a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer associated with a marker wherein the method comprises the steps of determining the presence or absence of the marker, and based on the
5 presence or absence of the marker, determining whether the subject has ovarian cancer or a pre-disposition to ovarian cancer, and/or recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition. The method may further comprise the step of receiving phenotypic information associated with the subject and/or acquiring from a network phenotypic information associated with the subject.

10 The present invention also provides in a network, a method for determining whether a subject has ovarian cancer or a pre-disposition to ovarian cancer associated with a marker, said method comprising the steps of receiving information associated with the marker receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the marker and/or ovarian cancer, and
15 based on one or more of the phenotypic information, the marker, and the acquired information, determining whether the subject has a ovarian cancer or a pre-disposition to ovarian cancer. The method may further comprise the step of recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition.

The present invention also provides a business method for determining whether a
20 subject has ovarian cancer or a pre-disposition to ovarian cancer, said method comprising the steps of receiving information associated with the marker, receiving phenotypic information associated with the subject, acquiring information from the network corresponding to the marker and/or ovarian cancer, and based on one or more of the phenotypic information, the marker, and the acquired information, determining
25 whether the subject has ovarian cancer or a pre-disposition to ovarian cancer. The method may further comprise the step of recommending a particular treatment for the ovarian cancer or pre-ovarian cancer condition.

The invention also includes an array comprising a marker of the present invention. The array can be used to assay expression of one or more genes in the array.
30 In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes

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can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development of ovarian cancer, progression of ovarian cancer, and processes, such a cellular transformation associated with ovarian cancer.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

E. Surrogate Markers

The markers of the invention may serve as surrogate markers for one or more disorders or disease states or for conditions leading up to disease states, and in particular, ovarian cancer. As used herein, a "surrogate marker" is an objective
5 biochemical marker which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (*e.g.*, with the presence or absence of a tumor). The presence or quantity of such markers is independent of the disease. Therefore, these markers may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate markers are of
10 particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (*e.g.*, early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (*e.g.*, an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker, and an analysis of HIV infection may be made using HIV
15 RNA levels as a surrogate marker, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate markers in the art include: Koomen *et al.* (2000) *J. Mass. Spectrom.* 35: 258-264; and James (1994) *AIDS Treatment News Archive* 209.

The markers of the invention are also useful as pharmacodynamic markers. As
20 used herein, a "pharmacodynamic marker" is an objective biochemical marker which correlates specifically with drug effects. The presence or quantity of a pharmacodynamic marker is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the marker is indicative of the presence or activity of the drug in a subject. For example, a
25 pharmacodynamic marker may be indicative of the concentration of the drug in a biological tissue, in that the marker is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by the pharmacodynamic marker. Similarly, the presence or quantity of the pharmacodynamic marker may be related to
30 the presence or quantity of the metabolic product of a drug, such that the presence or quantity of the marker is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic markers are of particular use in increasing the sensitivity of detection

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of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker transcription or expression, the amplified marker may be in a quantity which is more readily detectable than the drug itself. Also, the marker may be more easily detected

5 due to the nature of the marker itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein marker, or marker-specific radiolabeled probes may be used to detect a mRNA marker. Furthermore, the use of a pharmacodynamic marker may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct

10 observations. Examples of the use of pharmacodynamic markers in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S16-S20.

The markers of the invention are also useful as pharmacogenomic markers. As

15 used herein, a "pharmacogenomic marker" is an objective biochemical marker which correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod *et al.* (1999) *Eur. J. Cancer* 35(12): 1650-1652). The presence or quantity of the pharmacogenomic marker is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the

20 presence or quantity of one or more pharmacogenomic markers in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of RNA or protein for specific tumor markers in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be

25 present in the subject. Similarly, the presence or absence of a specific sequence mutation in marker DNA may correlate with drug response. The use of pharmacogenomic markers therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

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VI. Experimental Protocol

A. Subtracted Libraries

Subtracted libraries are generated using a PCR based method that allows the isolation of clones expressed at higher levels in one population of mRNA (tester) compared to another population (driver). Both tester and driver mRNA populations are converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Tester and driver cDNAs are then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique results in both subtraction and normalization, which is an equalization of copy number of low-abundance and high-abundance sequences. After generation of the subtractive libraries, a group of 96 or more clones from each library is tested to confirm differential expression by reverse Southern hybridization.

To create the subtracted libraries, a first group of regular cDNA libraries was constructed. Library johOa was constructed from a pool of 5 normal ovarian epithelial cell cultures. Library johOb was constructed from a pool of 5 ascites short cultured samples from ovarian cancer patients. Library johOc was constructed from a pool of 6 serous late stage (III/IV) tumor samples. Three subtracted libraries were generated from tumor samples. Library johOd was a subtracted ascites library, where the tester was johOb, and the driver was johOa. The johOe and the johOf library were both subtracted stage III/IV serous tumor libraries. The tester for both of these libraries was johOc, and the driver was a pooled RNA from normal tissues. The tissues used for this driver pool were: kidney, small intestine, prostate, lung, heart, muscle, spleen, pancreas, liver, and lymphocyte. Library cMhOg was the same as the johOc and johOf libraries, with the exception that normal ovary was added to the driver. cMhOh, i, j, and k are all stage I/II subtracted libraries made from pooled tumor RNAs of different histological types (h=serous, I=endometrioid, j=clear cell, k=mucinous). The driver was the same for these 4 libraries. It consisted of normal ovarian epithelial RNA and PBML RNA. Of the markers listed in Table 1, SEQ ID NOS: 1-129, 916-1029, 1566-1571 and 1607-1865 were identified in library johOa. Markers identified in johOb include SEQ ID NOS: 130-177, 1030-1081, 1572-1574, and 1866-1974. Markers identified in johOc include SEQ ID NOS: 178-269, 1082-1120, 1575-1577, and 1975-2060. Markers identified in johOd include SEQ ID NOS: 270-370, 1121-1304, 1578-1592, and 2061-2244. Markers

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identified in johOe include SEQ ID NOS: 371-611, 1305-1416, 1593-1596 and 2245-2487. Markers identified in johOf include SEQ ID NOS: 612-915, 1417-1565, 1597-1606, and 2488-2871. Of the markers listed in Table 1A, SEQ ID NOS: 2872-2976, 3817-3898, 4438-4443 and 4474-4675 were identified in library cMhOg. Markers
5 identified in cMhOh include SEQ ID NOS: 2977-3376, 3899-4072, 4444-4455, and 4676-5303. Markers identified in cMhOi include SEQ ID NOS: 3377-3495, 4073-4158, 4456-4460, and 5304-5637. Markers identified in cMhOj include SEQ ID NOS: 3496-3742, 4195-4390, 4461-4468, and 5638-6197. Markers identified in cMhOk include SEQ ID NOS: 3743-3816, 4391-4437, 4469-4473 and 6198-6398.

10

VII. Summary Of The Data Provided In The Tables

Tables 1, 1A, 2 and 3 are being filed concurrently herewith on a compact disc in lieu of paper copies. The compact disc submitted is formatted from an IBM-PC and is compatible with MS-Windows. The disc contains the following four (4) files:
15 Table1.text, containing 1,223kb, Table1A.text, containing 1,582kb, Table2.text, containing 10,600kb, and Table3.text, containing 568kb. The material on the compact disc, namely Tables 1, 1A, 2 and 3, is expressly incorporated by reference.

Tables 1 and 1A show 6398 novel nucleotide sequences. These 6398 novel sequences were determined to be novel through various BLAST searches of available
20 databases. Of these novel markers, SEQ ID NOS: 1566 – 1606 and 4438-4473 are preferred, SEQ ID NOS: 916-1565 and 3817-4437 are more preferred, and SEQ ID NOS: 1 – 915 and 2872-3816 are most preferred.

The sequences of Tables 1 and 1A were re-interpreted and vector sequences removed and those sequences are set forth in Table 2.

25 Table 3 correlates the SEQ ID NOS. from Tables 1 and 1A with those of Table 2.

The contents of all references, patents, published patent applications, and databases cited throughout this application are hereby incorporated by reference.

30 Other Embodiments

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention

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described herein. Such equivalents are intended to be encompassed by the following claims.

What is claimed is:

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Claims

1. An isolated nucleic acid molecule comprising a nucleotide sequence of Tables 1-2, or a complement thereof.
- 5 2. A vector which contains the nucleic acid molecule of claim 1.
3. A host cell which contains the nucleic acid molecule of claim 1.
- 10 4. An isolated polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence of Tables 1-2.
5. An antibody which selectively binds to a polypeptide of claim 4.
- 15 6. A method for producing a polypeptide comprising culturing the host cell of claim 3 under conditions in which the nucleic acid molecule is expressed.
7. A method for detecting the presence of a polypeptide of claim 4 in a sample comprising:
 - 20 a) contacting the sample with a compound which selectively binds to the polypeptide; and
 - b) determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 4 in the sample.
- 25 8. A kit comprising a compound which selectively binds to the polypeptide of claim 4.

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9. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample comprising:

- a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- 5 b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of claim 1 in the sample.

10 10. The method of claim 9, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

11. The method of claim 9, wherein the sample is isolated from ovarian tissue.

15 12. The method of claim 9, wherein the sample is a tumor sample.

13. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1.

20 14. A method of assessing whether a patient is afflicted with ovarian cancer, the method comprising comparing:

- a) the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
 - 25 b) the normal level of expression of the marker in a control non-ovarian cancer sample,
- wherein a significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with ovarian cancer.

30

15. The method of claim 14, wherein the marker corresponds to a secreted protein.

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16. The method of claim 14, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

17. The method of claim 14, wherein the sample comprises cells obtained
5 from the patient.

18. The method of claim 17, wherein the sample is an ovarian tissue sample.

19. The method of claim 14, wherein the sample is an ovary-associated body
10 fluid.

20. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a protein or protein fragment corresponding to the marker.

15 21. The method of claim 20, wherein the presence of the protein or protein fragment is detected using a reagent which specifically binds with the protein or protein fragment.

20 22. The method of claim 21, wherein the reagent is selected from the group consisting of an antibody, an antibody derivative, and an antibody fragment.

23. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed
25 polynucleotide or portion thereof, wherein the transcribed polynucleotide comprises the marker.

24. The method of claim 23, wherein the transcribed polynucleotide is an mRNA.

30 25. The method of claim 23, wherein the transcribed polynucleotide is a cDNA.

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26. The method of claim 23, wherein the step of detecting further comprises amplifying the transcribed polynucleotide.

27. The method of claim 14, wherein the level of expression of the marker in
5 the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide which anneals with the marker or anneals with a portion of a polynucleotide wherein the polynucleotide comprises the marker, under stringent hybridization conditions.

10 28. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with ovarian cancer by a factor of at least about 2.

15 29. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with ovarian cancer by a factor of at least about 5.

20 30. The method of claim 14, comprising comparing:
a) the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-2, and
b) the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with ovarian cancer,
wherein the level of expression of more than one of the markers is significantly
25 altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with ovarian cancer.

30 31. The method of claim 30, wherein the level of expression of each of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with ovarian cancer.

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32. The method of claim 30, wherein the plurality comprises at least three of the markers.

33. The method of claim 30, wherein the plurality comprises at least five of the markers.

34. A method for monitoring the progression of ovarian cancer in a patient, the method comprising:

- a) detecting in a patient sample at a first point in time, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2;
- b) repeating step a) at a subsequent point in time; and
- c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of ovarian cancer.

35. The method of claim 34, wherein the marker corresponds to a secreted protein.

36. The method of claim 34, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

37. The method of claim 34, wherein the sample comprises cells obtained from the patient.

38. The method of claim 37, wherein the patient sample is an ovarian tissue sample.

39. The method of claim 34, wherein between the first point in time and the subsequent point in time, the patient has undergone surgery to remove ovarian tissue.

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40. A method of assessing the efficacy of a test compound for inhibiting ovarian cancer in a patient, the method comprising comparing:

- 5 a) expression of a marker in a first sample obtained from the patient and exposed to the test compound, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
- b) expression of the marker in a second sample obtained from the patient, wherein the sample is not exposed to the test compound, wherein a significantly lower level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is
- 10 efficacious for inhibiting ovarian cancer in the patient.

41. The method of claim 40, wherein the first and second samples are portions of a single sample obtained from the patient.

15 42. The method of claim 40, wherein the first and second samples are portions of pooled samples obtained from the patient.

43. A method of assessing the efficacy of a therapy for inhibiting ovarian cancer in a patient, the method comprising comparing:

- 20 a) expression of a marker in the first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and
- b) expression of the marker in a second sample obtained from the
- 25 patient following provision of the portion of the therapy, wherein a significantly lower level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting ovarian cancer in the patient.

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44. A method of selecting a composition for inhibiting ovarian cancer in a patient, the method comprising:

- a) obtaining a sample comprising cancer cells from the patient;
- b) separately exposing aliquots of the sample in the presence of a plurality of test compositions;
- c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2; and
- d) selecting one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

45. A method of inhibiting ovarian cancer in a patient, the method comprising:

- a) obtaining a sample comprising cancer cells from the patient;
- b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
- c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2; and
- d) administering to the patient at least one of the test compositions which alters the level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

46. A kit for assessing whether a patient is afflicted with ovarian cancer, the kit comprising reagents for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-2.

47. A kit for assessing the presence of ovarian cancer cells, the kit comprising a nucleic acid probe wherein the probe specifically binds with a transcribed polynucleotide corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2.

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48. A kit for assessing the suitability of each of a plurality of compounds for inhibiting ovarian cancer in a patient, the kit comprising:

- a) the plurality of compounds; and
- b) a reagent for assessing expression of a marker selected from the

5 group consisting of the markers listed in Tables 1-2.

49. A method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with ovarian cancer, the method comprising:

10 isolating a protein or protein fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2;

immunizing a mammal using the isolated protein or protein fragment;

isolating splenocytes from the immunized mammal;

15 fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and

screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment to isolate the hybridoma.

50. An antibody produced by a hybridoma made by the method of claim 42.

20

51. A kit for assessing the presence of human ovarian cancer cells, the kit comprising an antibody, wherein the antibody specifically binds with a protein or protein fragment corresponding to a marker selected from the group consisting of the markers listed in Tables 1-2.

25

52. A method of assessing the ovarian cell carcinogenic potential of a test compound, the method comprising:

a) maintaining separate aliquots of ovarian cells in the presence and absence of the test compound; and

30 b) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2,

wherein a significantly altered level of expression of the marker in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses human ovarian cell carcinogenic potential.

5

53. A kit for assessing the ovarian cell carcinogenic potential of a test compound, the kit comprising ovarian cells and a reagent for assessing expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2.

10

54. A method of inhibiting ovarian cancer in a patient at risk for developing ovarian cancer, the method comprising inhibiting expression of a gene corresponding to a marker selected from the markers listed in Tables 1-2.

15

55. A method of treating a patient afflicted with ovarian cancer, the method comprising providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker selected from the markers listed in Tables 1-2.

20

56. A method of inhibiting ovarian cancer in a patient at risk for developing ovarian cancer, the method comprising decreasing expression of a gene corresponding to a marker selected from the markers listed in Tables 1-2.

57. A method for determining whether ovarian cancer has metastasized in a patient, the method comprising comparing:

25

a) the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-2, and

b) the normal level or non-metastatic level of expression of the marker in a control sample

30

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wherein a significant difference between the level of expression in the patient sample and the normal level or non-metastatic level is an indication that the ovarian cancer has metastasized.

5 58. The method of claim 57, wherein the marker corresponds to a secreted protein.

 59. The method of claim 57, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

10

 60. The method of claim 57, wherein the sample comprises cells obtained from the patient.

 61. The method of claim 60, wherein the patient sample is an ovarian tissue
15 sample.

 62. A method for assessing the aggressiveness or indolence of ovarian cancer comprising comparing:

 a) the level of expression of a marker in a sample, wherein at least
20 one marker is selected from the markers of Tables 1-2, and
 b) the normal level of expression of the marker in a control sample,
 wherein a significant difference between the level of expression in the sample
and the normal level is an indication that the cancer is aggressive or indolent.

25 63. The method of claim 62, wherein the marker corresponds to a secreted protein.

 64. The method of claim 62, wherein marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

30

 65. The method of claim 62, wherein the sample comprises cells obtained from the patient.

66. The method of claim 65, wherein the patient sample is an ovarian tissue sample.

TABLE 1
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Sequence 1

ACGCGTCCGGGAGACACAAAGCAGGAAGCCTCCGGGAGACCAGAGCTGGGTGCAGACATA
CACACACACATACACACAGACACACAGAGTCACACACACTCACACACACTCTCTCTCTCT
CTCCCTCTGTCTTTCTCTCTCTCTCTCTCTCTGTCTTTCTCCTGGACAGATCCACA
GTTATACACAGAAACAAACACACACGCACGTAGAGAAGTGATTCACAAACACTTAAAGAC
ATAAATCACAGGTGCAAAGCCATACCTGGGCTCAAAAACCTCCAAGAGAACGCAGCCTCA
GACCCACCCAGGGGCCAGGGGCCAGGGCTGTTTGCGAGACCAGCCAGGCGGGACCCAGGC
TTGCACGGGCAGGTACACGACATTCTTGGGCATACGCAGCCCGCCTGGCCGGAGCTGTGG
GAGTCCTCAGCCCCAAGACCCAGCAGGCGTCTGAGGCCTGCCCACTAAGGAGGAGGAGTC
ATTGCTGCCATCATTTATCATNCCCTCCCCAGCCACAGTCTGAGGAGGCCNTGTNACCC
TTCCCA

Sequence 2

CGTCCGGAAAGCTGGTGGGAATGCTAAGTTCGAGAGTTCTCTGGAGTCTCAGGAGGATTA
CGATCCTTGCTGGTCCCTTG CAGGAGAAGTACAACAGCAGAGCCGCGGCCCTCTTTAGGGA
TAAGGTGGTCGCTCTGGCCGAAGGCAGAGAGTGGTCTTTGGAGTCATCACCTGCCAGAA
CTGGACCCTACCTNAGCCCANGACGCTGCCGTCCATGGTGCACCGAGTCTCTGGCCAGCC
GCAGAGTGTGACCGCCTCCTNGGACAAGGCTTTTGAAGACTGGCTGAATGATGACCTCGG
CTCCTATCAAGGGGCCAGGGGAATCGCTACGTGGGGTTTGGGAACACGCCACCGCCTCA
NAAGAAAGAAGATGACTTTCTCAACAACGCCATGTCCTCCCTGTACTCGGGCTGGA

Sequence 3

NCCACGCGTCCGGGACGCGGGCGCCAGGTGCACAGCCCCAGTCCGCTGCGGGCGGGCGTC
GACATCTGCCGCGTGAGCGCGAGCTGGAGCTACACCGCTTTCGTGACCCGTGGAGGCCGC
TTGGAGCTGTCGGGCTCAGCCAGCGGCGCGGCGGGGCCGTGCAAGGACGCGTGGGCCTCG
GAGGGGCTCCTCGCGGTGCTGCGCGCCGGGCGGGGCCGAGGCGTTACTGCAGGTCTGG
GCGGCCGAATCGGCGCTGCGTGGGGAGCCATTGTGGGCCAGAATGGTGGTGCCCGAGGC
CGAAGGGGGAAGGACGATCCGGCCGGGTGAAGGCCAAGCTTGGGAGGCTACCCCTTGC
TTGCCCTGCGGCCCGCTGCCCTACGTGAGCCCCGCGGGCCGCCCTTCTACCGGCCTTT
TGGCTTCCGGGAGCTTTCGGGGCAACGCCAAGCTTGGGAGCTGGGGCCGCCAGCAACCCG
TTGCTTGTTGGACGCTGTGCCAAAGGTGGTTTCTGGGGGGCGGGG

Sequence 4

AGTCNCCACGCGTCCGGAATTGANGCCGCGGGGCGGGCGGCGGCGGGCTGGGCGGCG
GCCGGGACCCAGCGGGCCAGGTGGGGACGGCGCGGAGCGGGTGCGGGAGATGCCGTGCGG
GACTGGGGCCACCTGAGCCGCCCGCCTCGTCCCCGCCTTCTGTGGGAAGGATGTGCGCGC
GGATGGCCGGTCGCACAACAGCGGCCCCCTCGGGGGCCCTACGGCCCCCTGGCTCTGCCTCC
TGGTGGCCCTCGCCCTGGGACCGTCGTGAGAGTGGACTGTGGCCAGGCTCCCCCTGGACCC
TGTCTACCTGCCGGCAGCCCTGGAGCTCCTAGACGCCCCCTGAACACT

Sequence 5

TCNCCACGCGTCCGACTGTATGTATTCTGGATACAGGGGATACTGGGCTCGCTATGTGTG
TGGAGCCATCCCTTCCTTGCCCCAGCCCCACCTCCCTCTCAAACCCTCTCTGGCTCTTTT
TGAGCTTCCTTTCTGCTCCCCAGCTTGCCCACTGCTCAGTGCCCCACTTGGCTCTTTTG
CTACTTCGGGTGAGGTGGAGCCTCTTGGGAATGTGAAGTGCCTTACAGAAAGATTGCACT
TCAAGAGGAGAGGCTGCAGGGAGCCATCCTAAACCCAGAGGCCTGGAGCTTACCCGTGT
ACTTTACTTTTGACACAAGGGGGTCTCCTTAGTGCCCTCGAGAAGGGATTCTTGGGCC
TGAGCTTCTACTCTGAGGCCACCTTCTGTGCAAGCCCCAAGCTCCCTCAACTCTAGGCT
TGGAGTCTCAGTGGGGAAAAGCCCTGNTTTGGGG

Sequence 6

CGTCCGCGTCTCTCGCTGCGAAAGTTGGGGCAACCTGTTGCTAGTCTGGTCTTGGTGAC
AGCGAGGCTTCCGCGCTCGCTGCTGGTGAGCAGCCCCGGCGTGCCCCGCGGGCTGGAAGA
GGCGGCGGGCGTGATGCGGCCCGTGACGCGCCCCGCGCCGGCCCCGCGAGAACCTGGCCTC
CCTGGAGCGCGAGCGCGCCCGGGCGCACTGGCGGGCCCCGAGGAAGCTGCTGGAGATCGA

TABLE 1
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GAGCCTGCTCGACGCCATCAAGAGTGAGGTGGAGGCAGAGGAGCGGGGCGCCCGGGCCCC
AGCACCCCGCCCCGCGTTCGGAGGCTGAGGAGNCGGGTGGCTCGGCTGTGCGCCGAAGC
AGAGAGGAAGGCTGCGGAAGCGGCGCGGATGGGGCAGGCGGGATCGTGGGAGCTGCACNN
ACCGGATCGCCGGCTTGCGAGTGCTGCTGAGCCGGCGAGGCCNCGGGTCTGGAAGCGGA
ANCGCGCGGG

Sequence 7

NTTCGGGAGTCGACCACGCGTCCGCGCGCTGGAGGAGTGGAGCAAGCACCCGGCCCGGCC
CTGGGGGCTGACAGTCGGCAAAGTTTGGCCGAAGAGGAAGTGGTCTCAAACCCCGGCAG
GTGGCGACCAGGCCAGACCAGGGGCGCTCGCTGCCTGCGGGCGGGCTGTAGGCGAGGGCG
CGCCCCAGTGCCGAGACCCGGGGCTTCAGGAGCCGGCCCCGGGAGAGAAGAGTGCGGCGG
CGGACGGAGAAAACAACCTCAAAGTTGGCGAAAGGCACCGCCCCCTACTCCCGGGCTTGCC
GCCGCTCCCCGCCCCAGCCCTGGCATCCAGAGTACGGGTCGAGCCCGGGGCCATGGAGC
CCCCCTGGGGAAGGCGGCACCAGGGGAGCCTTGGGCGCCNNGGCTTCGGCCGCGACCCC
ATTTGGGGTAGACCACAAGAAAGCTTCGGGACCCTTTCGGCACCTTGGACAGCCAAGAA
TGGCTGNTGGGCACCCTTTCTCT

Sequence 8

CCCCGCGTCCGGAGCACGCAAAGGGAATAAATTGTAATTAGGTGGTGGGTGGCTAAAAAT
GACAATGCAAAGGTGTTGGATTAAAAAAAATCTGGTAGTAGAGGGAAATTATGGAGGA
TTTTTAAAAAGGTTAATGATAATATCCATCTACTTATGTAACTTTTTTGGAGATACCTG
ATAATAGTGTAGAGTGCATTGGAGAGGAAAAGTAGGAGTTGTAAAGACCATTTTGGATAA
ACTTTGAAGCAAGGGATAATGGCCTCAACCAAGGTAGTGGTGTGAAGATTGTTTACATA
AATAAGCAGATACAAATAGAAGGGATTTTCAAGTGGCATTGTAACCTGCATTTTCAAAG
GTTATTTGCCAAAAATCAAATTAACGGTATCTTCAAAAATCATGTTTGATGGATGTATCA
TCAAGGGCTTTCTTAAATTTTGTGAAAGCCAAGGAA

Sequence 9

CGCCTTCCCGGGAAGTTTGGAGGGCCCCGNAGGGGAAGCCCCCGCGNCTTCNNGGGGGCCN
GNCGGGCTTGAAGGCAANCCCCACCCCAAGTTTCCCCGCCNANGGANTNCAATGAANCT
TGACCGGGGCCCCCGGAACCCCNCGCTNGNCTTNTTNGGGGGTGGTTCCTTGGGTCCG
GTGGGGGGGAACCCCAAGTGCTTTTTCAAGGCCCGCGCGGGCCCCGGGGCCCCGGAAGG
GCCTTTCAAGTCTTNCCTTTCCCGGNTTGAAGAAGNAAAAGGCCGGGAANGGAAAC
CNGGGNAAAATCCGNGGNGGGCGCGCTTCNNCCGCCNNGGCGCCCCCTTGCCNNGGG
GGGGGNAAAGGGGNCAAAGTTTTCCNNGGGGCCCGGGGCCCGCGCNGNCCCTTTNAAN
TCAAGGGGGCCGGGNCGGNCTTTCCCAANNCGGCCAAGTTCTTCAAAGGGGGCCCCC
CGGGNTTTGGGCCCGGNCCGGGNCNGNAACCTTGGGGAAGGAAAAAATTCAAAAAGTTTT
GTTGGCCCGGTTTCCGGGTNGGAATTGCCCCCNAAAATTTGNAAGCCGGGGGGGGGNN
NCCTTGGGGGGCCCCCTTTGCCCCNTTTAAAGGGAANGGGCNAAAACCTTTNCCCAAC
CGNCCAANNGCCCCCGTNAAAAAANGGGCGCGCTTNNTTTTGNCCGGGGCCCCNAANAA
GGGCCTTTTCGNTTTTTTCGGGTTTTTTCCCCCGGGCGGGCGGGGCGGNNNCNTTTTTT
TTTTTGCTTTTAAAGGGGGG

Sequence 10

NCGCGTCCGCGCATTGTGGCCAAGTGCCATGAGGAGCAGCTGGATCATTCTGTCCAGTC
ATATATTAAGTTCGTGTTCAAGACCAGGGCATGCAAGGAGAGGACTGTACATGAGGAACT
GNCTAAAAATGTGACTGGTCTTTGAAATCAAATGACTCAACAACAGTAAAGCATGTCCT
AAAGCATTCCTGGTTCTTCTTTGCAATTATCCTAAAATCGATGGCACAGCACTTGATTGA
CACAAATAAAATCCAGCTTCCCCGGCCTCAGAGATTTCTGAATCTTACCAAAATGAATT
GGACAATCTTGNCATGGTCCTATCCGACCATGTGATTTGGGAAATACAAGGATGCACTTG
AAGAAACANGAAGGGCAAACCACAGCGTTGCCAGATTTCTCAAGCGCTGCTTTAC

Sequence 11

CGCCNCGCGTCCGGCTTCTAGAAAGAGCACAGTCCCTTAAAGCACCTCTATTGCTACAA
TAAAAAGTCTAGCAGATTGTAACCTTAGTTACACAAGTTCTAGAGATGCTTTTGGCTATG
CTACACTGAAAAGACTACAGCAACAAAGAATGCATCCATCCTTATCTCACTCTGAAGCTT

TABLE 1

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TGGCATCTCCAGCAAAAGATGTGCTATTTACTGATACCATCACCATGAAGGCCAACAGTT
TTGAGTCCAGATTAACACCAAGCAGGTTTCATGAAAGCCTTAAGTTATGCATCATTAGATA
AAGAAGATTTATTGAGTCCTATTAATCAAAATACCCTGCAACCGATCTTCCTCAGTGCGG
GCCATGGNGTCCAGTGCCACATNGGGGGGTGAGAATGATTACATTGGGCTTGCTCTCCC
GGNGGATATAAATGATATATTTTCANGGTAAGGGTATTTCTTATTTTTAGACAAAAACAT
CCCCNCATGATGATCCAGGNGCCAGAGCATTTGCCCTGAATGCAGGAGGGCTTTCATNTG
GNACTGGGNGGGCTTTGNAAAAATTTTTT

Sequence 12

TTCGGGAGTCGACCACGCGTCCGCCAAGTCCTGCGATGATGGACTCAACACCTTCCGCGA
CGAGGGCCGGGTTCTGCGGCGCCTGCCAAACGCATACCCAGCCTGCGGATGCTCCGGAG
CTTCTTCACCGACGGGTCTTGATAGCTGGGGCACCTCTGAAGATGCTGACGCTCCTTC
TAAGCGACACTCAACCTCTGACCTCTCAGATGCGACCTTCAGCGATATCAGGAGAGAAGG
CTGGTTGTATTATAAGCAGATTCTACCAAGAAGGGGAAGGCTGAGGACCGGGATGACAT
GCTGGGCTGGATCAGAGCGATCCGGGAGAACAGCAGGGCCGAGGGCGAGGACCCCCGGCT
GTGCCAACCAAGCTCTTGATCAGCAAGAAGCTTAATGATTATCGCAAAGTGAGCCATAGC
TCTGGGCCCAAAGCTTGATTTCTTCCC

Sequence 13

GTATTAATGTTCTCAGGCATGAAGCAGAATTTTACGGGATCACTCCATTAGTAAGAAGGC
TTCTCTTATGTGAAGAATTGGAGCGTTCCTCTTGTTGGCAGTGTCTTTTTCATGGTTACT
TGCCCCCACCAGGTATTCCTAGTNCGTAAATAAACACACAGTCAGATCTGCTGATTCT
AGGAATGGTCTAAATTCTACAGAAGGTGAAGCCCGGGGAAATGGTACACAGCCTGTTCTC
TCTGGAACGGGAGAAGAACTGTTAGGCTAGGATTTCTGTGGATCCACNAAAGGTGCTA
ATAGTAGCTGGCCATCACAACTGGATTGTAGCTGCATATGCCATTTTGCTGTGTGTTAC
AGAATCAAAGAATNTTNANGATGGCAGCAAGTGNTTACGAGCCCATATTTGGATTGGACT
ATCGAACGAGTAGNTTTAAATGCAAAGGTGGATGGAGGGCCACATGGAGACAAAAGACAA
AAATG

Sequence 14

GCCNCGCGTCCGAAAAAATTAAGAGAAGGCCTGGCGGCCGGTCTGAAGTCATCTATAATT
ATGTACAACGCCCCCTTCATCCAGATGTCATGGGAAAAGGAAGAAGGGAAGAGTCGCCATG
TGATTCTAGTGTGTTGGAAGCAAATCCCTCACGAATCTGGTAGCTGCTGGAGATGATG
TCTTGGAGGACCAGGAGATTAATGCATCACCCACCCCAAGTGGATGAACTTGACCGGC
TAAATGCCCCACTTTCTCAGATGGCTTCTAACGACTTTTCAAGATTAGGGCCAGCTGTGGG
TCTACTCCTTGTGGAGCCCATCTCACCTGGGATGCCTGCAGCCAGCCCTCCCTCGTGAT
TTGTCTCACCTTGAGTAGGAGACATGCTTCTCCCTAACCTTTTCTTTCTGCCATAATT
AACATATGTCCTTTTCAGTAAGTCCATGCCTCTGGCAGGGGATGAAAGAAGTACTCACTG
GGTAATTAGCTACCATCTTTCAGCACCCCTGGTAACCTTGAAAAATTT

Sequence 15

TCGGGAGTCGACCCCGCGTCCGCCGAGCGGGGCGGCGCGGCTGGCGGGGCGGCGGCGG
CTGAAGCGAGAGCGCGACGCGACGCGACCGCGGCTTCCCGAGCTGCGCCTGGCCGNCCAG
CGCCGCGGNCCGCCGAGGCTGGAGGGGTCCGGGCGCGCGTCCATGGTCGCGGCGTCCT
GAGGCGGGGACGCGCCCCGCGCCCCCGGCCCTCTNCGCCTCCTCCGCGGGGCGGGCG
GCCTCCTCCGCGCCTNCCCGCGCCCCGCGCGGNTCGCCGCGCCTCCTCCTCCTCCTC
CCTGCGGCTCCCCCGGCTTTGAGAGCCCGGGGCGGCCTGTGGCGCGCGGAGCCCGCGCC
GGAATGCGCCTNTTTGACCTTGAGGGGAAACATGCGTTTGCCNTGGATCGTTTGAAATT
CTGAGTTTGGGATCCCCGNCCGCGGCGNCTGGCTTTTTCGCCCGCGGGTTTTTCTTTT
TCCTTTTGCTTTTTTTTCTTCTT

Sequence 16

NGCCCCGCGTCCGTTTTAATTATTTGTTNGAGCCTGCANAGTAANGTTNTTAAAAATA
TAACGTTTCATACGCATTTTAATTAACCTTTGAAAGTTCATATGCATCAGAAAATTTATGAA
AATTTGAATGAAAAAATTTTCATCTATTTATTTTCTAATTTTAATGGCAAATTTACACT
ATTATGGCTGATAATTCTGTGAACCTACCTTCTTGTTGACTGATTCTTTTTCCCTTAATC

TABLE 1

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CCAGCTTTAAGGAGATAGGTGAAGTTATTGTACAAAGTTAAGTGATACCATAAAGTATAT
ATTATAAAGTCATACATGGCTTTTGGACAGTNTTATATTTTCAGTTGCAGTGCTGCATTCC
ATTAAATTTCAAAAATGCTAGGGAAAATGTGTTTGATAAAATTTTNTGCAGTGAGAAAT
GACAGACTGAGTGCCTGACAATTTAAGCCACATATGAAAGTATGCAAGTAAAGANTTCAG
GTCCTTAATGTCATCTATATCATGGTATAAAAG

Sequence 17

CCACGCGTCCGGACGAGACGAGCCCACTAGTGTCCCCGAGCGGGCCCAACCCCCGGACT
ACACCTTCCCGTCGGGCTCGGGCGCTCACTTTCCGCAGGTGCCCGGGGGCGCGGTCCGAG
TGGCTGGCGGCGGGCCGGCTCGGGCCCCNTCCGCCGGGCTCGCCGGGCCACGACCGCTGA
GCGGCAGCCACTGTTGGATCGGGCCCCGGGGCGCGGNGGCCAGGGCCAGACCCAAACCGT
GGCGGCGCAGGCCAGGCTCTGGCCGTTCAAGCCGNGGCGGCAGTCCACGCCGATCAGGC
CCACCGNGAGCGGAACGAG

Sequence 18

GGGAGTCGACCNCGCGTCCGGGCGGTGGGTGTCCGCTTCTCTCTGCTCTTCGACTGCACC
GCACTCGCGCGTGACCCTGACTCCCCCTAGTCAGCTCAGCGGTGCTGCCATGGCGTGGCG
GCGGCGCGAAGCCGGCGTCCGGGCTCGCGGCGTGTGGCTCTGGCGTTGCTCGCCCTGGC
CCTGTGCGTGCCCCGGGGCCCCGGGGCCGGGCTCTCGAGTGGTTCTCGGCCGTGGTAAACAT
CGAGTACGTGGACCCGACAGCAACCTGACGGTGTGGAGCGTCTCGGAGAGTGGCCGCTT
CGGCGACAGCTCGCCCAAGGAGGGCGCGCATGGCTTGGTGGGGCGTCCCGTGGGCGCCCG
GCGGAGACCTCGAGGGCTGCGCGCCCCGACACGCGCTTTTTTCGTGCCCGAGCCCCGCGGC
CGAGGGGCCCGCGCCCTTGGGTGCGCCCTGGTGGCTCGTGGGGGCTTGCACCTTTAAGGAC
AAGGTGCTTGTGGCGGGCGCCGAGG

Sequence 19

NATGTNGNNCNAAAAAGGCCNCGCNTTANAGGCCAGGAAACNCGTAAAAAGGGCNCGCGTT
GCTGTGCGTCTTTTCCATAGGCTCGCGNCCCCCTGACCNAGTCATCATCAAAAATCCGA
CNGCTCAAGTCATGAGGTTGGCCGAAAACTCCGACAGGGACTTNTAANAGNATAACCCANG
GGCGNTTCCCCCTGGGAAGGCTCCCTTCGTGGCGCNTCTCNNTGTTTCCAGACCCCTGC
CCCGCTTTACNCGGNATTACCCTNGTCCCCGCCNTTTTCTTCCCTTTCGNGGAAAGCGGT
NGGGCGCCTTCTCNTCAATTAGGCTTACCGCCTGNTAANGGTATTCTCAAGTTNCGGNT
GTANGGGTGCCGTTTTCGCTTCAAAGNCTGGGGCCTTNTGTGCCACCGGAAACCCCCC

Sequence 20

TTCGGGAGTCGACCNCGCGTCCGCCTGGAGCCGCCAGAGTTTCCGCACCCGGGAGGGAGA
TGCGGGCCGGGCTCAGGCTCCTTGAGTTGTAATTTAGATTGAGAAGTGGTTTATCCTT
TGA CTGGAAAAGAAAGTAGCTGCAGTATCCCCAGCACTTGCTGAGAGCATGCCGTAT
GCCAGGCTGTGAGGCTCGAGAGACAAGCAGTGGAAGAGTTGCGGCCTGTTTCATCTCTGG
ATTGTAAATCTGAGCCTCCTTCTGGCCCCTGGAAGGGGACAGCATCACGATGGAATGATT
CCTAACCAGCATAATGCTGGAGCCGGGAGCCACCAACCTGCAGTTTTTCAGAAATGGCCGTG
TTGGAACTGATTTGGATCACATTCTTCCATCTTCTGTTCTTCTCCTCATTCTGGGCTAAG
TTAGTAGTGGGATCGGTTGCCATTGTGTGTTTTGCACGCAGCTATGATGGAGACTTTGTC
TTTGATGACTCAGAAGCTATTGTTAACAATAAGG

Sequence 21

CGACCACGCGTCCGGCAGCCGCGGGGCGGGCGGGCGGGCGGGCGGGCGGGCGGGCGGGGACCC
AGCGGGCCAGGTGGGGACGGCGCGGAGCGGGTGCGGGAGATGCCGTGCGGGACTGGGGCC
ACCTGAGCCGCCCGCCTCGTCCCCGCCTTCTGTGGGAAGGATGTGCGCGCGGATGGCCGG
TCGCACAACAGCGGCCCTCGGGGGCCCTACGGCCCCCTGGCTCTGCCTCCTGGTGGCCCT
CGCCCTGGACGTCGTGAGAGTGGACTGTGGCCAGGCTCCCCTGGACCCTGTCTACCTGCC
GGCAGCCCTGGAGCTCCTAGACGCCCTGAACACTTCCGTGTGCAGCAGGTGGGGCACTA
CCCACCTGCCAACTCCTCTGAGCTCCCGATCTGAGACCTTTCTGCTCCTACAGCCCTG
GCCAAGGCCAGCCACTTCTCGGGCCTTCTACCCAA

Sequence 22

TABLE 1
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CGCGTCCGCCCGGTGCCTCCGCCCATGGAACGCGCGGAGTGGCGCCGCCGCGGCTACGCG
CCGCTGCTCTATCTGCAGTCACACTGCGACGTGCCAGCGGACCGGGACCGCTACGTGCGC
GAGCTCATGCGCCACATCCCGGTAGACTCCTACGGGAAATGCCTGCAGAATCGGGAGCTG
CCTACCGCGCGGCTACAGGACACAGCCACGGCCACCACCGAGGATCCAGAGCTCTTGGCT
TTCTTGTCGCCGTATAAGTTCCACTTGGCCCTGGAAAATGCCATCTGTAACGACTACATG
ACAGAAAACTGTGGCGTCCCATGCACCTGGGCCGCTGTGCCCGTGTACCGCGGTTCTCC
CTCTGTGAGGGACTGGATGCCGAACAATCACTCCGTATCCTGATTGATGATTTTGAGTC
TCCTCAGAAGCTGGCAGAGTTTATTGACTTTCTGGACAAGAATGATGAGGAGTATATGAA
ATACCTGGCATAACAAGCAACCT

Sequence 23

CGCGTCCGGCTGGGCGAATNAGGGATTCCGGTTCACAATGGATGCTGATAAAGAGAAAGA
TTTGAGAAATTTCTTAAAAATGTGGATGAAATCTCCAATTTAATTCAGGAGATGAATTC
TGATGACCCAGTTGTGCAACAGAAAGCTGTCCTGGAGACAGAAAAGAGACTACTGCTTAT
GGAGGAAGACCAGGAGGAGGATGAATGCAGGACCACCTTGAACAAGACTATGATCAGTCC
TCCACAACTGCTCTGAAGAGTGCAGAAGAAATAAACTCAGAGGCCTTCTTGGCATCTGT
GGAGAAGGATGCAAGGAACGAGCCAAGAGAAGAAGGGAAAAACAAAGTCTTGGCGGATGC
CCTAAAAGAAAAAGGAATGAAGCATTTGCTGAAGGCAATTATGAAACAGCTATCCTGCG
CTACAGTGAGGGGTTTGGAGAAGCTGAAGGACATGAAAGTGCTGTACACCAACCGAGCCC
AGGCTTATATGAAACTTGAGGA

Sequence 24

GGGAGTCGACCNCGCGTCCGCTCCCTCTGAGTTGCGCTGGGCTTGGCTGCTGCACCATGA
CCCTGGAGGCGATCCGCTACTCGCGGGGCTCCCTGCAGATCCTAGACCAGCTGCTGCTGC
CCAAGCAGAGCCGCTACGAGGCGGTGGGCTCGGTGCACCAGGCCTGGGAGGCCATCCGCG
CCATGAAGGTGCGGGGCGCCCCGGCCATAGCCCTGGTGGGCTGTCTCAGCCTCGCCGTGG
AGCTGCAGGCGGGCGCCGGGGGACCGGGACTCGCCGCGCTCGTGGCCTTCGTGCGCGACA
AGCTGAGCTTCCTCGTCACCGCCCGGCCACCGCTGTCAACATGGCCCGCGCCGCGCGCG
ACCTGGCTTGATGTTGCAGCCCGGGAGGCCGAACGGGAGGGGCGCTACGGAAGAGGCCGG
TCCGGGAGAGAGTGATCTGCTGCACCGAGGACATGCTGGAGAAAGACCTCAGAGACAACC
GAAGCATTG

Sequence 25

GGAGTCGACCNCGCGTCCGGGATAACGAAGCTGCTACCATGATGATGGCTGATCTCATGT
TCAGAAAACAAGACTATGAACAAGCAGTGTTCATTTACAGCAGCTTTTGAACGTAAGC
CAGACTCCTCGAGTTCAGGGATCACACCATATTCCCAATATCAGACAAAATGCCACACAC
ATGGATGTGGCAACATAGATGTTTATTGGTTGAATGGATCAGTGAATGACTGTAAAACAC
CAAGTCAATTA AAAACACAGCAGGAGAATCGCTTGAACCTGGGAGGTGGAGGTTGCCGTG
AGCCAAGATCACACCACTGCACTCCAGCCTCGGTGACAGAGTGAGACTTGGTCTCAAAAA
CAACCACAAAATTTTAAATAATTATATGACATTATCTCGTTTGATTGATCTCCTAAGAAG
ATGTGGAAAACCTCGA

Sequence 26

ACCGTCCGGGGCCATCCAGGAGAGCCTCCTACCAGCACAGAAGGCCTGTGCCCCAGCGCC
CTGAGCGAGACAAGCCGTTTTGATAATGACTTGAGCTAGCCATGGAGCTCTCTGCCAAA
GAGCTGGAGGAATGGGAGCTCCGGCTCCAGGAGGAAGAGGCTGAGCTCCAGCAAGTCTTA
CAGCTGTCACTCACTGACAAATAGACCTTTCAGCCTGTGAGCCTCTGCACAAAGCAGAGG
CTGTGGGCTGTCACAGATGCTGTGTCAACCAGGGCCCTAGGGCTAAGGGCCTGCACCTTG
CGTGATGCAGCAGGCAACAACCTGCCCTTCTTTATGCAGAGGTGCAGAACCGAGGACTC
CTGGGCCCATCCAGGCTGCTTCCTTGGGGTGG

Sequence 27

NCCNCGCGTCCGGCCGGCGATGCCGCGCCCCCGGGCCGGGCTGTAGCGGGGCGCGGCTG
GACGTGTGCGCCGGGCAGGCGGGACATGGAGGTGGTGGACGAGACGGAGGCGCTGCAGCG
CTTCTTGAAGGCCACGACATCAACGGTGCCCTGGAGCCCTCCAACATAGACACCAGCAT
CCTGGAGGAGTACATCAGCAAGGAGGATGCCTCCGACCTCACACTGCCGGAATCTCCCCC

TABLE 1
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AGACTCGGGCTCCGAGGCCTACTCCCCCAGCAGGTGAATGAGCCCCACCTNCTGCGCAC
GATAACCCCTGAGACACTGTGCCACGTGGGGAGTGCCCTTC

Sequence 28

CGCGTCCGCNAGGGAGGGCCGAGCGAGGCGCAGGCAACCGGGCAGCAGGCATGATGCCCT
CGCCTAGTGACTCCAGCCGCTCGCTGACCAGCCGGCCAGCACCAGGGGCCTTACCCACC
TNCGCCTNCACCGACCCTGGCTGCAGGCCCTGCTTACGCTGGGGCTGGTCCAAGTGCTCC
TGGGCATACTGGTGGTCACCTTCAGCATGGTGGCCTCTTCCGTCACCACCACCGAGAGCA
TNAAGAGGTCCTGCCCCTCTTGGG

Sequence 29

ACGCGTCCGATTTTAGTNGCAAGGAGTCCATGTGTTCAACTCCAGCATTTCTGTGTCTC
CAGAGACACCGTATGTGAAAACAGCGCTGCGCCATCCTCCGTTCCAGCCACCTGAGCCCC.
CGCTGAGCAGCCCAGCCAGTCAGCACAAAGGAGGACGTGAACCACGAAGCTGCCCTGAGA
CGCTCACTCACGCTGTGGGGATGTCAGAGAGCCCCATCGGACCCAAATCCACGATGCTCC
GGGCTGATGCGTCTCGACGCCCTCCTTTCAGCAGGCTTTTGCTTCTTCTGACCATTT
CCAGCAACGGCCCTGGGCAGAGGAGAGAGAGCTCCTTCTTCTGCAGAACGCCAGTGGGTG
GAGAGCAGNCCCAAGCCCATGGGTTTCCCTGCTGG

Sequence 30

CCGGTTNCTTGTTNNGTTNATTGATTTAAATAGAATATCAATTGAATTTAGAAAATTCTC
AAAAGCCAGTTTAAATGCTGTTTCATCTTTAAGGCCAAAAAAGTTTAAATCCAGAGGCAGT
CTTTCATTCTGCACTAATTTATAATTTAGATCAAAGAACTAATTATATATCTCAAATTTA
ATAATAAAAAGGTATAGTAATGAGAATTAATTTATGGTAAATTATATACTCAGAATGT
TAAAGTAACTTGGAAATCTTAATCTAAGTTAAGTATCTTTTTATTTCTTACTTGTCCCTG
TTTGATTTATTAAGGGAAAAGAAAATTTAAGGAGTTGCCAGTATTTCTTTGTCTATTGA
AAGTGGAATGTTTATTCACCTTATTTATATACTTAAAAGACATTGTATTGGCCTGGTCT
CGAACTCCTGACCTCAAAGGTGGATCCACCCACCTCGGCTTCCCAAAGTGCTGGGATTA

Sequence 31

GCCGGTGATTTTGAACAATTCTGAAATATTTTCAGGTAAGATTAATAACATCCAATTACAA
ATATATGTTTCAATATTTTATACGTATGTCTACTTTGAAAGTTAAACCAATAGTATAGAA
AGCCTAAGAATGAACACTGATTGGACATACTCACAGAAATTAAGGGAAAAACACATATTG
TAAATTCCTGTCAATGTTTGAGTAGAATACAGAAGTACATAGCAGTCTTCAATTTTTAA
ACACAATTATGGGCTTATAACTGGACGTGACATGCATCATTTATTAGAACAATATTATTT
ATTTATACTAAGTAAGGATATAAGATCACAGAAGCTTAGTGTTATAACGGAGACTTCACA
GACATTCATAACTAATGTTTTCTAAGGCAAATAAGGGGCATAAACCAGAACTCATGGGTG
AGTGCCAGAGGTAAGTATAAAAAGGTTATGTATGAAAGACATTTATTTATAGGAGAATTT
CTGAGGGATTCTATGCCTTTTCAACTTA

Sequence 32

NCGTCCGGGAAACTGGTTCNGATGGTGTCTGCCAGGAGCGCCTGACACGCACCTTCACA
CGCAGCAGCCACACCTACACCCGCACGGAGCGCACGGAGATCAGCAAGACGCGGGGCGGG
GAGACAAAGCGCGAGGTGCGGGTGGAGGAGTCCACCCAGGTCGGCGGGGACCCCTTCCCT
GCTGTGTTTGGGGACTTCCTGGGCCGGGAGCGCCTGGGATCCTTCGGCAGCATCACCCGG
CAGCAGGAGGGTGAGGCCAGCTCTCAGGACATGACTGCACAGGTGACCAGCCCATCGGGC
AAGGTGGAAGCCGCAGAGATCGTNGAGGGCGAGGACAGCGCCTACAGCGTGCGCTTTGTG
CCCCAGGAAATGGGGCCCCATACGGTCGCTGTCAAGTACCGTGGCCNGCACGTGCCCGGC
AGCCCCTTTCAGTTTACTGTGGGGCCGCTNNGTNGAAAGGTGGTGCCCAAGGTGCGGG
CCCGGAGGCAC

Sequence 33

CCGCGTCCGCAGGAAATTGTTAAAAATAATTTGGGGGTGTTTATTGGGGAAGGAAACAGG
GCCTTGACAGTGGAGGACTTGGAAGACATGTAATTTAAGATATAGAGTATGATTGTTGGA
AAATAAGCATGGAGATCCAGAAGGAATCTTAAGAGTTTTTCTATGCAAGTGAAGATGGAA
GAAAATATGTATTTTACAAAAGATAAATTACAAGTACCTTATTTGCTTTGCAAAATACT
TATCATGTTCTTCCACTATTTTATTATATTTTAATTTTAATGAAACTTATATAACATT

TABLE 1
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ACACTAAATTTTAAATACATGGCTCAAGACAAAAAATGGGGAAAAATATTTTTAAAAA
TCACCCCAAATCCTGGTACTCAGACATAACCACTATTCAAACCTGGCAGAGTAATATTT
TCCTGTCTGCATGTGTGCCACNATGTGTGCATGCATACCACAAAGTAGATGTTTTACTAT
ATCTCCTGGGTATTATCTGCTTTTTCCC

Sequence 34

ACGCGTCCGGGACAAGAGAAACATAAGCNGGAAAAAAGGAGGAGGAATAAACACACGCCT
GTCCATAATAAACTCGCTCTTGAAGACTCAGCGGCAGCCCTGCACCGGAGACTGACGAC
TTGCGCGGCTGTGACCTCCGCCCTGCAGCGGACCCTCGACTGCCCTGCACTGCGGCTCTG
GAGGCCCCGACTCAGTGCATGGGAAAGAAATCCTCACTATCAGAAAACAGAGGGGCAATC
TGCTGCTCTCCCTTTCCGGCCAAACACGTACCCCATCAACCGGATACCTACCAAGAGGCT
TTCAGAGGAGGCGCCCAAGGTCTCCAGGCCCGCCCTCCCAATCACGCTCCGCTCAGC
CCCCCAACTTTGGCCTCCGGGAAGTTCGCAGCGTNTCTCACGCTTGGCAGGAAGTTCC
CGCCAAGGCTTTCGGAAATCCTTTAAAAGCAACGCTTGCCTGGGCGGGGCTTTGGTG

Sequence 35

CCCCGCGTCCGGTAGATTGCTTGTGGCTGGCAGTGAAGATGGTGGAGTTCAACTTTTTGA
TATAAGTGGGAGGGCTCCCCTCAGGCAGTTTGAAGGCCATACAAAGTAAGAGACAGTTGG
TTTCTGTGTGTTCTGGTTTTATTTGTTGTAAGCTCTTTTTTCTCTGGACTTTGGTTAA
AAAGATAGAGATCAGTTTTATGGAGATTATTTGCCTATAGGTACTATATTTCTGATTGT
TCTAAGAGTGCTTAACCTTGGGTCCGTGGTCCAGTTTCATGGGGCTTATGAATTCCTAG
AATTGTATGTGATATTTTAGGAAATACACGTTTATCTAGGGAGCTACTCTGTAGCTTTTG
GTTAACTTTAGTGGGGTCTGTGGCCAGCTGAGATTATGAATTACTGACCTGAAGACAAC
CTTACAGCTGGTAATGACAGCTCTATAGGCCTGTACTGTCTTAGAGGCTCTTATGTTGAA
GTCAAGTANGAAGGTGGATTTCTTCTGAATTATAGTGTTTTGCCCTTAATAA

Sequence 36

CNCGCGTCCGCGACGCGTGGGGGCGAGGGCCGCTGGGGCCGCGAAGTGGGGCGGCCGGG
TGGGCTACGAGCCGGGTCTGGGCTGAGGGGCGCGGCTTCGCGGTGGACCCAGCCCGGCA
ACGGGAAGGCGAGCTCTCCTCCACCGTCAAAGTAACTTTGCCGCTCCTTCGCGGCGC
TCCCGAGTCTCGCCGCCGCGGGCCGCGCAGTCCGCGAAGAGCCGCTCCTGCGTCAGGG
CCTCCTTCCCTGCCCGCGCGGGGCCACTGCGCCATGGACGCCACAGCACTGGAGCGGG
ACGCTGTGCAGTTCGCCCCTCTGGCGGTTACGCGGACACGAAGGCCGCTACTCCGAGG
CGGTGTTTTATTACAAGGAAGCTGCACAAGCCTTAATTTATGCTGAGATGGCAGGATCAA
GCCTAGAAAAATTTCAAGAAAAA

Sequence 37

GCGTCCGCGGACGCGTGGGGCCGCCGCCGCCGCCGCCGCGATGTGACCTTCAGGGCCG
CCAGGACGGGATGACCNAGGAGCCTCCGCCCGCGGNGCCCGNNGGCTCGCCTCGGCCTCCC
GGGCGCTCTGACCGCGCGTTACCCGGCCCGCCATGGCCCCCTTCTCTCTNGCCCGGGCNC
ACGCTCGACCCTGCGCNCGTATCGCCAGCAAGTCTGCTGCCTGCATGCTGCNTGGCTCGC
GAGNNGTTGGCGCGCNTTGCNCTGNNGCCTGTTTGACGAGCNGCCGCCGAGGCCCACTG
CANGNTTANCTCGACGGTCTCCNAAGNCANACCGCNCNCCGCCGNCCTTTCCAAGNTCNT
TTCNCGAGGGGANGGGCNCAANGGCCAGGGGNCNCCACNCTGGGGAAGAAGGGNGGAG
TTNGNCNGATGNGNATGAGNAANCCTTGAGNCAAGANCCCGTCCCNAAGNNGNAGNGNC
AGCCCNNGGGGAAGGGTTGGTTTTCNANGNTAAACCGNAACCCCCCGGAAGTNAACCGG
NGATTTTAATTTATTTTACCCNCANANGNAAATAACCTTTNAANAACCATGGGNCATT
NNAAANCAAAAGNTAAATTNGGGGGNAACTTAACCGNTAAACCANCCCCAAA

Sequence 38

CNCGCGTCCGGCGGGTCCCGCCGGCGGGTACCTGGGCACTGCGCCCCATCTGGACTGAAA
TGGGGACACCCCTTCGGGGGTCCCAGGCTCCTGGCCGTATTGTTCTCCTTCTCCTCGTGA
TAACTCCGCAGTGGAGGTGGATTCCGTCCAAGACGCCAACGTGGCTCCGCGTAGCAATC
AGCGCTGCAATCCTGGCGGTTACCTCAGCGGCGGCGTCTCTCTGCGCCTCACACTCGC
AGCCCGCGGCCCTCCCAACTTAGGGCGTTACAAAAGAACTACTCCAGACGCGCTGCA

TABLE 1
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AAGGGAGGCGCATGTGCCCCGAAAGCTGGCGATCAGACGGGGGGGGGCATTCTGCATGTGT
GATGTTTCTGGGGGCGGTGGGGAGTGTGTGTGCGGGTCGGGGGGCGGG

Sequence 39

NTGGTCTTTCTTCTAAGAAGGAGATGGAGCCAATTTCTCACAGCTCGTGCCCTCAGTACT
GAGGGTATGGAGGAAAAGGCAGTCAGTCAGTGTCTAAAAATGACGCACGCAAGAGACGCT
CGGGGAAGATGTAGCTGGACCTCTGAGATTTACTTTTCTCAAGGTGGACAAGCTGTAGCC
ATCGGGCAATTTAAAGATCGAATTACAGGGTCCAACGATCCAGGTAATGCATCTATCACT
ATCTCGCATATGCAGCCAGCAGACAGTGGAAATTTACATCTGCGATGTTAACAACCCCCCA
GACTTTCTCGGCCAAAACCAAGGCATCCTCAACGTCAGTGTGTTAGTGAAACCTTCTAAG
CCCCTTTGTAGCGTTCAAGGAAGACCAGAACTGGCCACACTATTTCCCTTTCTGTCTC
TCTGCGCTTGAACACCTTCCCTGTGTACTACTGGCATAAACTTGAGGGAAGAGACATCG
TGCCAGTGNAAGAAAACCTCAACCAACCACCGGGAT

Sequence 40

CACCGNNCGCGCTCCTTCTGCCGCCAGGGCGAGGCTGGCACCCGGCCAGCGCGGGCAGGG
CCACGGGTGCCCGGTGTTTCCCGGTTGTGGAAGGCGCTCAAGGTGCGCGGCCCGGGGCG
CGCTACTGGGGGCGCCCTCCGCGGTGGGCAAGCGCGCCAGGGATCGGCCTGGGCANGCCG
CGGGGCGCGCAANGCTGCGCTTCCCTACGCCCCCCTCGCTTCTCCGGCACGGCGGC
AACGGAGATTTCTCTCGGGGAACTACGCGGATCCTTTTCGGGGATCCTCGCCCCGCC
CAATTTCTNCGCCCCCTCCCCTTGTGGGGCGCCTGGGCTGGCCCGCGCAGGGGA

Sequence 41

CNCGTCCGGTTCCTAACACAGACGAACTCAGCTTCCTTTGCCATGCCTCTGACTCGAGCC
AGCCTTTCTTTTATCCTCCGTTTTCTCAGATTCCTCCACACAGTCTTTTCCAGGTC
TAGATCGCTTCCCTCGCCCCAATCTTTCCTTGAACCCCTTTTCCAGTGTCCCAAAGCTGT
CCACTCTTACGCCTCTTCCAGAAACACAGGCTACCTCCCCCAATCCCCAGTGCCACTC
TGGATTGTAATATCCACTCAGGAGCTTCTTTCTTGTAAATTTCCCTCCCCCACCCCCA
CCCTCCCCGGGTCGTCTGTTTTCTTCTATGAAGCAAATATTACTCATCAAATATAGGAAC
AAAGGCCTAAGTCCTTTCTGNGCTTATTCTTNGGGTGACTGGATCTTAGATCCTATCA
TTTAAGTAGATGATGGTT

Sequence 42

GGTGTGACCNCGCGTCCGCGCTTCTCNCCTCGGCCCGTGGAGCCGGGGCGTCCGGGCGT
AGCCCTCGCTCGCTGGGTGAGGGGTGCGCGTGGGGGAGGCAGAAGCCATGGATCCCG
GGCAGCAGCCCGCCCTCAACCGGCCCCCCAGGGCCAAGGGCAGGCCGCTTTCGAGCCC
CCGCGAGGGGCGGGCCCGCGTCCGGACCCGGGCAACCGGCACCCGCGGCGACCCAGGCG
GCGCCGCGAGGCACCCCCCGCCGGGCATCAGATCGTGACGTCCGCGGGGACTCGGAGACC
GACCTGGAGGCGCTTCAACCGCCGTCATGAACCCCAAGACGGCCAACGTGCCCCAGAC
CGTGCCCATGAGGCTCCGGAAGCTGCCGACTCCTTCTTCAAGCCGCGGAGCCCAAATC
CCACTCCCGACAGGCCAGTACTGATGCAGGCACTGNAGGAGCCCTGACTCACAAGCATGT
TCGAGGCTCATTCTCTNCAGCTTCTTGCAGTTGGGAAGC

Sequence 43

GTCGACCACGCGTCCGGGAGCTGCGGGCGCCCTCCCTTATCGCCTTGGCAACGACCCAGCC
GCGCCGCGAGGAGAACCGGGAATGGAGGTCTGCGGTGAGGGGCGCCGAGCGAGGGGAGG
CGCGGGCCACGGGAGTTCGGGAGTTCGGCGTTGCCCGGCAGTCCGCAGTCTTCGGCGG
GAAGGCTGTCCCGGCGCCTCAGGCAGCTCTGCGTGGGCCGGGGTGAATTCCTCGCGATCC
CCTGCGCGAGGTGAAGGGCAGGGACCTTTGCCGCGCCTTCCACGCGCCGTGCCCCACCGG
CGAAGTGGGCTCCATCTTCTTCAAGACTTGTGCTTCGCGGACAGGGCGCCCGTGGGTT
CTTCCCGGCCCTTCCGTACCGTCTCTTCCAAGCGGGCTTCGGAAAGCGGGTTCCTTG
TCTTTCGGACGCATTTTACCCCGCGCCGGGGAGGAGCTTNCCGGGNAAGGGTTCACGG
CGGCCGAGGGTTTTCC

Sequence 44

CGTCCGCGAGACTCCCGCGCCACCACCCCGGCGGAGCTGCTGCTGAGCCACTCAATCT
GAGCCCTGGCTACTAATAAAGTTCGTTTAAAAATCATAATCATTCTTAAGAGAGCGAAAG

TABLE 1

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AGGGTGCGAACTAGCGCTCGGCCCGCANGGAGAGCTGGCGGTCNNGAGGAGACAGCN
GCGGCAGCGTTGCGCCGCGACAGGAGGAGCCGGTGGCGCCGGGCGGCGGGTCCGCGGC
CGGTGGGGGACNGTGAGTAGCGGCTCGCGCTGCGGTGCAGCGCGCTGCACTCACTCGCC
CTCTCCAGGGGCTGGGGGTTCTCGGCTCCACTGGGGAAGACTCAGCTTCTCCCCGGGG
TCCCCGGTTGTGCCTTACTCTCCGGAGTGGGAGGGGTATCGAGGGCAGGGGCCTCCCCG
CCCCGCTCCCCATCCCCCGTTCCGACCGACGAGCCCGGCTTCTTCCCTTCCCTGAG
CACCATCCCAAGTTCCA

Sequence 45

TCACCACGCGTCCGGGCGTCCGGGTACCCGAGGGCTCTCCCGCGTTGCTGGCACCGCTGG
CGCCGCGGTCTCGTAGCGCATGGGCCTCCTCCGAGGCGGGCTCCCATGCGCTCGGGCCAT
GGCGCGCCTGGGCGCTGTGCGCTCCCACTACTGCGCCCTGCTGCTGGCCGCGGCGCTGGC
CGTCTGCGCCTTCTACTACCTCGGCTCAGGCCGGGAGACCTTCTCCAGCGCCACCAAGAG
GCTGAAGGAGGCCCGCGCCGGGGCTCCCGCCGCGCCCTCGCCGCCGCGCTGGAGCTAGC
GCGGGGCTCCGTGGCGCCAGCCCCGGCGCGAAGGCCAAGAGCTTGGAGGGCGGCGGTGC
CGGGCCGGTGGACTACCACCTGCTGATGATGTTACCAAGGCGGAGCACAATGCCGCGCT
GCAGGCCAAGGCCGCGTCCGCGTTGCGCTCA

Sequence 46

CCACGCGTCCGTGTGCGGGCCGGCGCTCCCTTCTCTGCCNNGTGGCGAGTACACCTGCTCA
CGTAGGCGTCATGAGGTCTCGGTTTCGAGACCTGGCCCCGAACGATGGCGAGGAGAGCAC
GGACCGCACGCCTCTTCTACCGGGCGCCCCACGGGCCGAAGCCGCTCCAGTGTGCTGCTC
TGCTCGTTACAACCTTAGCAATTTTGGCCTTTTTTGGTTTCTTCATTGTGTATGCATTACG
TGTGAATCTGAGTGTTCGTTAGTGGATATGGTAGATTCAAATACAACCTTTAGAAGATAA
TAGAACTTCCAAGGCGTGTCCAGAGCATTCTGCTCCATAAAAGTTTCATCATAATCAAAC
GGGTAAGAAGTACCAATGGGATGCAGAACTCAAGGATGGATTCTCGTTCTTTTTTTA
TGGCTACATCATCACACAGATTCTGGAGGATATGTTGCCAGCAAATAGGGGGGAAAAT
GCTGCTAGGATTTTGGGA

Sequence 47

CGCGTCCGCGGACGCGTGGGCGGGGCGCGGAGCCGGGCCGGGGCATGCGCCGTCTCCGN
CTCGGGGCGCNCGGGGGCGCCCTGCTGAGCGCTACCCACGTGCGTCCGCGCCACCTCGCG
GGCGACCCCGCGGCCAAGGCCCGCGGAGCGGNTCCCGGGCGCCCCGAAGTACGCCCC
AAGTTTGGGCGAAGTTTGCCTGCGCCTCTCCCCGCCGCCACGCGGCGCGCCGGGGCCGCG
GACGGNAGCGGCCCGGGGATGCGCCTTCCCGGGGTACCCCTGGCGCGCCTGCGCTGC
TGCTGNTGCTGCCGNTGCTCGCGCCGCTGATGGGAACGGGTGCGCCGGCCGAGCTGCGGG
TCCGNGTGCGGCTGCCGGACGGCCAGGTGACCGANGAGAGCCTGCAGGCGGACAGCGACG
CGGACAGCATCAAGNCTCGAGCTGCGCAAGCCNGACGGCACCCCTCNTNTTCTTNACCGCC
GACTTTAAGA

Sequence 48

GCGTCCGCTGCATTGCGCCACCGACTCCACTATGTTGAAGAAATTCGACAAGAAGGATG
AGGAGTCAGGTGGAGGCTCCAACCCATTCCAGCACCTTGAGAAGAGTGCGGTACTCCAGG
AGGCCCGTGTATTTAATGAACTCCCATCAACCCTCGGAAATGTGCCACATCCTCACCA
AGATTCTTTATCTCATAAACCAGGGGGAGCACCTGGGGACCAAGCGAAGCGACCGAGGCCT
TCTTTGCCATGACCAAGCTCTTTCAGTCCAATGATCCACACTCCGTCCGATGTGCTACT
TGACCATCAAGGAGATGTCTTGATTGCAGAGGATGTCATCATTGTCACCAGCAGCCTAA
CAAAAGACATGACTGGGAAAGAAGACAACCTACCGGGGCCCGG

Sequence 49

ACGCGTCCGCGAGAANGCTCTCAGATGGGACAGTCTTTTACTTTTATTCTCACCTCTGTAA
ATAGCAGGACAGGTTGGGGTGGGCCTGACTTCTATTCTGCTTTCAGGGGGTACTTACTGG
AAAATCAACTTAGGAAGTGAATTTGAGGGTTGGTGTAATTTAAGCCAGCCTCTGATCC
TTGGTTGCACAAAGCCTAATTTCAAATATTTCTAACAGATTCAAGACTGTATTGGCAAA
GAGGTAGAGAGCTATGATAATGACATAAATTACATAAAAATCCAGTTGAATGAATAAGAA
GGAATTTGGGCGTATAACCCATGGAACACCAATGGTGCTAAGAATTTGCCAAACCTCAG

TABLE 1
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CTTCGTATAAGTCCCAAAGAACTCAGGCTTATAGCACTAAGCAAATTACCAGTGGGAGGA
GGAGGACCTGCCACGGAGCTGGATAATTACATTTAAATATTTTGGCANTCTGTTGGAGA
C

Sequence 50

NCGCGTCCGGCAGGCGGGTCTAGAGAGCGTTCCANGCCGTCTGTATATCTCCCCAGATAC
CTGAAACTGACCACCTGAGTACGTTTTCCCATTTGCTGAGCTGTTTCCCTGATATCTGGCC
ATGCAACGGAGATCAAGAGGGATAAATACTGGACTTATTCTACTCCTTTCTCAAATCTTC
CATGTTGGGATCAACAATATTCACCTGTCAACCCTAGCAACTTTGGCCCTNAACATCTGG
TTCTTNTTGAACCCTCANAAGCCACTGTATAGCTCCTGCCTTAGTGTGGAGAAAGTGTAC
CAGCAAAAAGACTGGCAGCGTTTACTGCTCTCTCCCCTTACCATGCTGATGATTGGCAT
TTGTATTTCAATATGGCATCCATGCTCTGGAAAGGAATAAATCTAGAAAGAAGACTGGGG
AAGTAGAT

Sequence 51

GCGTCCGGAAGGTCTTGAGCCATCTGGATGGCGGGCAGTCTGGCACACTAATGTGTTCA
AGGTGCTGGTTGAGATCACAGATGTGGACTTTGCAGCCTTGAAGGCAGTGGTGAGGCTTG
CTGAACCATACTCTGTGACTCTCAAGTGAGCACTTTTACCATGGAGTGCATGAAGGAGC
TCCTTGATCTGAAGGAGCATCGGTTGCCCTGCAGGAGCTGTGGGTGGTGTGATGATT
CAGGA

Sequence 52

GTCGACNCGCGTCCGGAAAAAATGACCCAGAGATATTAACAACTTGACCTGGTTA
TACAGTTAGATATTTGCACAGTCTGGACTCAAACCTGGAGGCTTCTGACTCCTCATCTAGG
CTCCTCTCACTCTGCCATTGCATGGGTTTTCTCATATACCTTCTCTCATAAGGTTTTAC
AAATTTGTCACCGTCAAATAATTATCAAAATTATTCACACTATTATAGATGAAAAAATG
TGCTTATAAAGATTAAGTAACTTTCTGAGGGCGCAGGTATCTGGTTCACATAACAACTA
GCCTGGCTTAGAATAAACACATATTTCTGGTTCTGAAGTTGGTGTCTTCTCCTACCACTT
TCTGCTGTCTCTAAAGATAAAGAATGTTATTGGCTCACTGAATTAATCCATTCTGTTCC
TGGCTGAAATAAAAATTGGTATATTCCTACGTGAAGTGTCAACAGGAAGGGGGCTTTTA
CAACTTCCTT

Sequence 53

GGAGTCNCCACGCGTCCGCGCGCTGGAGGAGTGGAGCAGCACCCGGCCGGCCCTGGGGGC
TGACAGTCGGCAAAGTTTGGCCCGAAGAGGAAGTGGTCTCAAACCCCGGCAGGTGGCGAC
CAGGCCAGACCAGGGGCGCTCGCTGCCTGCGGGCGGGCTGTAGGCGAGGGCGCGCCCGAG
TGCCGAGACCCGGGGCTTCAGGAGCCGGCCCCGGGAGAGAAGAGTGCGGCGGGCGGACGGA
GAAAACAACTCCAAAGTTGGCGAAAGGCACCGCCCTACTCCCGGGCTGCCGCGCCTCC
CCGCCCCCAGCCCTGGCATCCAGAGTACGGTTCAGACCCGGGCCATGGAGCCCCCTGGG
GAGGCGGCACCAGGGAGCCTGGGCGCCCGGGGCTCCGCGCGACCCCATCGGGTAGACCA
CAGAAGCTCCGGGACCCCTCCGGCACCTCTGGACAGCCCAGGATGCTGTTGGCCACCCCTC
CTNCTCTTCTCTGGAGGGCGCTCTGGCCCATCAGACCGGATTATTTTTTCAA

Sequence 54

CNCCCGTCCGGAATNCCCATAGTTAGCTGCTGTGCTTTCACAACTTCTTTCTCTGTAAAT
TCCTCGCTTGGCNCTGAGAAGGAAAAAAGATGTTCTGTAAGGGCTCAGCGAGGAATTTAC
AGAGAAAGAAGTTGTGAAACCACCATAGTTAGTTGCTGTGCTTTGAATTTCTTTTGCTCA
AATGGCCTCAGCGAAATCTTATTTGCCTATAGCATATCTACAAAAATTTTCTAGACCG
TCTTTTCTACAACTGGATGGTAAAGTTGATTGAAGTGTGCCTCATGTAGCTTTATGTTTG
GGGCATTTGAAGGGCTATGGCTGGACCAGAGTGTAATATAAATGCTTAATAGAGAGGGGA
AAAGAAGAGTGTAAGAACCATTATAGGGCTGGGCTCACGCCTGTAATCCCAGCATTTTGG
GAGGCTGAGGCAGGCGGATCACGAGGTGAGGAGTTCNAGACCAGCCTGACCAACATGGTG
AAACCCCATCTCTCTAAAAATACAAAAAT

Sequence 55

GTCGACNCGCGTCCGCAGCCTTCCGGCTGCGGAGGGGGCTCGGCGGCGGGCCGGCGGAGAA
AGTTGCTCCGAGAAGAGGCTGGGTGAGCTGGGCCGAGCCGGGCGCGCAGGGCGGGCGTGC

TABLE 1
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GCGGGCGTCCCGGGCGGACGCGGCGCGGAGACTGCCGCGCGTCCCGGGGGTTCCGATTT
GAAGACCTTGCTTCTCATCACCCACTGGATTATGCCCCAGGCTTTCCTACCCAATGATCC
TCTTGCAACACGCCGTGCTTCTCCACCTAAGCAGCCCTCACCTCGCCTCCTATGTCAG
TGGCCACCAGGTCTACAGGAACCTTGACGCTTCCACCACAGAAGCCTTTTGGGCAGGAGG
CTTCCTTGCTTCTGACAGGGGAAGAAGAGTTATCGAAGGGAGGGGAGCAAGGACTGTGCC
CTGGAGGAGCTATGTAAGCCCCTGTACTGCAAACCTCTGCAATGTCACCTTGAACCTGCA
CAGCAAGCCCAGGCTCATTATCANGGTAAAAATCATGGTAAGAAA

Sequence 56

ACCNCGCGTCCGGACCTGTTGGCGACATGGTGCCACCCGTGCTGGAGACTTCTCACGTGT
TTTGCTGCCCAAACCGGGTGCGGGGAGTCTGAACTGGAGCTCTGGGCCAGAGGACTTC
TGGCCTTTGGCACGTCCTGCTCGGTGGTCTATGACCCCTGAAAAGGGTTGTTGTTA
CCAACCTGAATGGTCACACCGCCGAGTCAATTGCATACAGTGGATTTGTAAACAGGATG
GCTCCCCTTCTACTGAATTAGTTTCTGGAGGATCTGATAATCAAGTGATTCACTGGGAAA
TAGAGGATAATCAGCTTTTAAAGCAGTGCATCTTCAAGGCCATGAAGGACCTGTTTATG
CGGTGCATGCTGTTTACCAGAGGAGGACATCAAGATCCTGCATTATGTACACTGATCGTT
TCTGCAGCTGCAGATTCTGCTGTTGCACTCTGGTCTAAAAAGGGTCCAGAAAGTAATGTG
CCTTCAAACCTTAAACTTTGGAA

Sequence 57

GTCGACCACGCGTCCGTCTCATTTGTGAAGAGGTCTGTCTTCTGAGGAAGCAGGGGACC
CTCACCTGTGAACCAAGTGTGCCATGGGAGCTGCTCCATGTCCAGGTCCAGGTCTCCTGG
TCTGCAGGGAACGGCACAAGAGGGCTGGCCTAGGCCAGGAGGATGTGATCTGTCTAGAA
GGGGGCTGACCTGCTTGCTGACCCCGCTTGCTGCTGCCTGGCTGACCTGACTCAGCCACG
GCTGTTCCGAGGGCCCTTCTGAGTACGAACTTCCAGTTGGAGGATCTGGGTGAAGACCCA
GCTGCTTGAGATAGCAGCCTCTGGCTAGGCCCTTGGCGTGGCCAAGCCAATCAGGCAGGT
TTAGAGCCTGGTGCCCTTAGACAGGTCTGCAACCAAGAACAGGGGGTAGCCTTCAAAGG
CCAGCCCTGCCTTCCAACCACCGCTCCACAGCGAGGGAAACCAAGGCTCTTAGGGCAGGA
GGCTTGT

Sequence 58

CCNCGCGTCCGGGGAGCAGGGATCAACGGTGGTCCCGTAAACCTGACAGTAAACCTGAC
AGAGGCTGCAGGAGTGCATTTCCACCCAGGGTGAAGTCAAGGAGTGGAACTCCACACCCG
TTTCTTTGGAGTCAAGGCGCGACCTCTCAGGGAGGAGACTGCTCCTGGTTGCCACTGCC
GGGTCAATCCAGCTTGACGTGGAACCTCCGCAGCCTGGCCTCTTCCAGGGTAGCCCTC
ACTCCCCTCTCTTGTCTAGGATAAGGCCGAGGAAGGCTGACGAGTTCAGCTCTGGG
GATGCCCTATCAGCTGTGTACCTTGAACAAATCATTTCTCCTCTTGGGTCTCTGTTTC
TCCAGTGTGAAACGTGGTGAAGGCATGAGGGGCTATGGGAGCCCCAAGGCCTCTTTCAGA
GATCTCCTCTGGGTCCCATGTGACCCCGTGGCTATCCCCAAGGCAAGAGGGTCCCCAGC
CCTGCACCAAGGCCCTGGG

Sequence 59

CCGAGGAAAGGAGTTGGTTCGCGCAGGTGCGGCGCCTGGGTCCCCATGGCGCTGTGGCGC
GGCTCCGCGTACGCGGGCTTCTGGCGCTGGCCGTGGGCTGCGTCTTCTGCTGGAGCCA
GAGCTGCCAGGCTCGGCGCTGCGCTCTCTGAGCTCGCTGTGTCTGGGGCCCCGCGCCT
GCGCCCCCGGACCCGTCTCCCCGAGGGCCGGTTGGCGGCAGCCTGGGACGCGCTTATC
GTGCGGCCAGTCCGGCGCTGGCGCCGCGTGGCAGTGGGGTGAGTGCCAACGGGGCCTGGG
TCTNTGAGCCTCCGAGGTGGGCTTGGAGGTGGGGCGAGCCGCGCAGAAACAGGGCTTC
TCAGAGGNCCCCGGGAGGCGCTTGCTGTCCGCGCTGGCCCC

Sequence 60

CGCGTCCGGTGGGAAGCCAGAAGATAAAACCAAATGGCTGGGCACGTCTTTAGGTTATTC
CTAGCTAAGAGTTAAGAGTTGTAAGCTCTCTCATTCTTTGTTCTTCAGCCTTAAACTATC
TTTCTTCTATTAACTTTATTTGTCTCAGTTACAATGATAGAGGTAACCTCACATACTAA
AAGAAATTAGGTTACCATGTGAAACATTCTTCTTGGCTTGCTAATGTTATCAGATCCA
AACAGCATCTGAAAGAAAATTTCCAAGTACGATGTTGTTCTCTGTTTTCTGAAATACA

TABLE 1
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TATCATATGTTAAAGTGAGAGTTTTTATACATGTTGAAAGAAGTTGAATGACATAACAAA
TAGTTACTGAGGCCTCCATTTTCTTACTTCACAGTTAAAATTCCTGTTTCTCTTTGGGTA
TAGGAGGGTAGAAAGAAGTGGGAGAGTAATAGCATTTTAAACACAGAATCAAAAATCAT
ATTAAGAAGTAG

Sequence 61

CGTCCGGAGCATCGCGCACTGCGGCCGGGTACCGACGTGGGCATCCGCTACGTGGCCAA
GTA CTG CAGCAATGCTGCGCTACCTCAACGCGAGGGGCTGCGAGGGCATCACGGACCACG
GTGTGGAGTACCTCGCCAAGAACTGCACCAAACCTCAAATCCCTGGATATCGGCAAATGCC
CTTTGGTATCCGACACGGGCCTGGAGTGCCTGGCCCTGAACTGCTTCAACCTCAAGCGGC
TCAGCCTCAAGTCTGCGAGAGCATCACCGGCCAGGGCTTGCAGATCGTGGCCGCCAACT
GCTTTGACCTCCAGACGCTGAATGTCCAGGACTGCGAGGTCTCCGTGGAGGCCCTGCGCT
TTGTCAAACGCCACTGCAAGCGCTGCGTCATCGAGCACACCAACCCGGCTTTCTTCTGAA
GGGACAGAGTTTATCCGGCGTTGTATTACACAAACCTGAACAAAGCAAATTTTTTAA
AGCAGCGTATGTAAAGCACCGACACCCACTCAAAACAAGCTCTTTCTTTCNGGAAGGGTA
TTAAGGAAT

Sequence 62

NCCACGCGTCCGCCAGNCTGTGAAGGATCCAGACTGGCATATGCAGGAGGAAATGGGGC
GGGCGAGGAGTAAGGACCCCAAAAAGCAGGGGTAGGGAAGGGCCCTCCAGCGCCCCACT
GTAATAGGGGCCCTCATCAATGCCCCATGCTCACTGAATAAAGCACTGCCAGCGAAAGGTG
AAAAGAGGAACAAAGAACATTCTCCTGGACGCCACCCACAGAAAGCCACGTGCAGGCTTG
GCCCTCACCTTGGGGACCTTGGACACGGAGCTGGTTATGTCACATCTGGCTCTCAGAGCT
GGGGCAGCGTCTAGGAGGCCTGATGTAGAAAGCACTCAGCTAAGCCCTAGTTACCGGCAC
ACGGGCACCGCGCCCCCTCTCAGCAAACCTTNCACGTCTTATGAAATTAGCACTGGATT
CCACTTCAATTGGA

Sequence 63

CCCACTGTAATAGGGGCCTCATCAATGCCCCATGCTCACTGAATAAAGCACTGCCAGCGA
AAGGTGAAAAGAGGAACAAAGAACATTNTCCTGGACGCCACCCACAGAAAGCCACNTGCA
GGCTTGGCCCTCACCTTGGGGACCTTGGACACGGAGCTGGTTATGTCACATCTGGCTCTC
AGAGCTGGGGCAGCTGTCTAGGAGGCCTGATGTAGAAAGCACTCAGCTAAGCCCTATTTA
CCGGCACACGGGCACCGAGCGCCCCCTNTCAGCAAACCTCCACGTNTTATGAAATTAGCACT
GGATTTCACCTTCAATTGGA

Sequence 64

NCGCGTCCGCTTCATCTTAGGATAAAGTCTAAATCTTTGTTTTTGTCTATTGTAATAAC
TCATAAATCCTAGGTTATAAAGATAAAGCCTTAACTTTATCTCATCATCCAGCCCAATT
TCCAGCCACAATGAAGTACTTAAACTCTGTGCTTTGTACTTGCTGTTCTCTTGGCCTC
CAATTCCTTTTCATCTTTTCCATTCCGGTAAAGTTTGTATCCACAGGCCCTATCTTGG
AAGCCTCCAGCAACTTCTCCAGACAGAGGTGTTAGCAGTGTAGGATCAGATTTCTCAACC
ACGTCACTCCCATGTCTGGGTAGATATCTCTGCCCAAGTGTCTCATAGCACTTGAGCAG
TACTCTCTAAGCGCCCAGGATCTACCATGTTGCTTTTTTAAATTTGATTAATTTATTTT
TTTATACTGCTCCTTGTGGAGCANGGAGTGTCCAGAGTAGCCCAACCATGTTATATTGA
ATGGATCTGTGTGCATAATGCAGCTGCCATCTACATCGTATATTTTTGTCTCCTCAAGG
GTAGGGA

Sequence 65

GTTTGTATTCTGGATACAGGGGATACTGGGGGCTCGCTATGTGTGTGGAGCCATCCCTTCC
TTGCCCCAGCCCCACCTCCCTCTCAAACCCTCTCTGGCTCTTTCTGAGCTTCCTTTCTCTG
CTCCCCAGCTTGCCAGTGCTCAGTGCCCCACTTGGCTCTTTTGCTACTTCGGGTACAGGT
GGAGCCTCTTGGGAATGTGAAGTGCCCTACAGAAAGATTGCACTTCAAGAGGAGAGGCTG
CAGGGAGCCATCCTAAACCCAGAGGCCTGGAGCTTACCGTGTCACTTTACTTTTGTACAC
AGGGGTCTCCTTAGTGCCCTCGAGAAGGATTCTTGGCCCTGAGCTTCTACTCCTGAGGCC
ACCTCTGTGCAGCCCCAGCTCCCTCAACTCTAGGCTGTAGTCTCAGTGGGAAAGCCTGGC
TTGGGGGTCTCCTAGGAATGTCCACCTGAAGGCACACTTGATAGGGGCTTGACAACTTA

TABLE 1
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TGTCTGCCAAGGCCACCTGAGGAACTCCTGGTGCCTATAAGTTCCACCTTCCCTTCCTTT
NCT

Sequence 66

CGTTCGGCAGCAGCAGCTGGCGGCCAACCGGCACAGCCTGGTGGAGAAGCTGGGGGAGCT
GGTGGCGGGTGCCACGCACTGGGTGAGGGCCAGTTCCTTCCCACTGCTCTGTGGC
CACCCACAGGAGGAGACGCCCACCCACCCACGCGNCACCAGCGACCCCGGCCGA
AGACATGCTGGTGGCCATCCGGCGTGGGGTCCGGCTCCGCAGGACCGTCACCAACGACAG
GTCGGCGCCCCGCATCTTATGATGGCGCCACCCTCCCCATCCTCTCAGGCCCACTGCGA
GCAGGTGGCCTGGTCTGTGAGCCGAGGCACTCAGAGCAAAGGCCAGCCAGGAGAGAGG
ACAGAGCCAGGGCAGAGGCCATGCCACTTTATGGAAAGACACCTCACTTGGATTCCAGCA
TTTAAACAGGAAGTGACTTCTTAGCAAGCCTGGCCAGGACGGAGCCTGCAGGCCTGGGCC
TGGTTCGGGGTCTGTTTTATGCTCTTCGGTCCCTTCTCTTCTCTCTGGGGCCCTGCCT
CTTCCTACCCATAAAGCACCAAAACCAGGGCCGCTGCCATGACAGAGGGGCCAGGCTGGC
CTTCCTTTCACATCCCGGCCCTNTTCCAAGGCTGGTCTGCCTNACTTCTTCTGGAATGTG
GGCCCCCTCTCCCTTGCTGACCCCTCTTCTNTTGGCTTNTTGGCTTTCCANGCCCT

Sequence 67

CGCGTCCGGCAACCTAAAAATAGGATGCACCAATAGCATGTGGTTCCAAGTAAGTTGTGA
TTTTATTTTGGAGACAGTGTTCCACTGGAAGGGAGGGAAGGGCTTACATTACAGACAGT
AAGCAGGGCTGTGTAAGGAGCTACATTTACTTAACAGTCTCCTTCCAGCTAGGTTTGT
TTTATTTATTTGCAAGTCAGCTAAGAATTAACCTTTTAAACCATCTAAAACAGGCAAGCA
ATATAAGATTTCTACTAGTGCAAGGTAAGTGGTTTGAATATACAAGTGCCCTTTCCTGC
CACCCAGTCTCACTACCGTTTTAGTCCTGCAGCTGGGTAAAGCCACTATTGTGTGGAAAC
TCTCCCATGTGCCCTGTCTCTACCTCTGGACACACCAGTCTCCTTCTTCCACCTATTCTAT
TCCTCAGTTAAGCCAAGTGATCAGAAGTAGTATTAATGGGTAGATAATTTTA

Sequence 68

GCCACGCGTCCGGCGCCGGGTGCGCCAACCTACGCAAAGACCAAGCGGGCTCCGCGCGGAC
CGGCCGCGGGGCTAGGGACCCGGCTTTGGCCTTCAGGCTCCCTAGCAGCGGGGAAAAGGA
ATTGCTCCCGGAGTTTCTGCGGAGGTGGAGGGAGATCAGGAAACGGCTTCTTCTCACT
TCGCCGCTGGTGTAGTGTGCGGGGAGATTGGCAAACGCCCTAGGAAAGGACTGGGGAAAAA
GCCCTGGGAAAGTGGAGAAGGTGATCAGGAGCCGGTCCACTACGGCAGTTTATCTGTCT
GATCAGAGCCAGACGCGACGCTCCACTTCGAGTTCTTTCCAGGTGTGGGGACCGCAGG
ACAGACGGCCGATCCCGCCGCTCCGTACCAGCACTCCAGGGAGAGTCAGCCTCGCTCC
CCAACGTCGAGGGCGCTCTGGCCACGAAAAGTTCCTGTCACTGTGATTCTCAATTCCTGC
NTGGGTTTTTTT

Sequence 69

ACCCANACCTGGGAGGAATTAATGGAATGCTTGNCCCTGGGCAGCCTTAGAAACAGACCC
NAGCTTATCTAANGCTGCTCCGAGGCAGTGACCCAACCTANGGCTCAGGAAGTCAAGAANA
TTGACCAAGCTTATAGTGATCACCTCTTGACCTTTGTGTACAGTCNTTTTGCTTTTTAA
AACCTTTTGTGAACCGNTTATGGCCTTTGATTCTGACAGGCATCNTAGTTGTGAAGGGG
AACANGGGCAGGATATAATGTTTCGTTTACCAAATACAANAAAATCNGANGTACCCAGNT
AGATCACAANATTTTTTGGGAGAAGGNCTNTTGGGTCTCTTCCAGGAGNTCACTTCANNN
TTGGNAACCTTGACAGGGGCTTGGGGAATTTANTATTCCCCTTGGGCGCAGGGNCNCAAA
GGGTGGCANTTTCCCTCCTTGGAGNTTTTTTTTTCAAGAANTCCTTGCNTNGGGGAAAGA
TGGTTACNANNATCCCGGAATTTCCAACCCCTTCCCTATTTTTTTGGTTTAAGG

Sequence 70

CGCGTCCGGCACATTAAAAAAAATACTTATTTTTATTATGGAAAGGTCTTGGAACATT
CTGATAGTGAGCTTCCGGCATTCAATTGCTGTATCTGGCTTAGGAGATGCTAGGGTGGCA
AGAAGAGGCACAGGCTTAGATGCGCTGGGTGGAGAGTTGGCTTTAGTAATGATGGTTGAC
TCTAACGACTTGATTATCAGCTGTGCCTTTTTTCTTCTGCCTTCTGAGGTGTGTTGCCT
GCATCCTAATTCACGTAAGTAGCAAGCTAAGCAGGTTGTAGCTGGAGATTGTAAGAA
ATCCTGAATGGAAACCAAGAAAGACTGTCACATCACATGATGTGCCCTTTTCAATCCCA

TABLE 1
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TGTCCTTCCCAGTGGCATCCCAGTGCTGTCTCTGCCCCCTGCTGCTTCTGTAAAGATTT
TCTGACACAAGTAACTGCCTCATAGACCTTCCTTTTATGAAATCCTGAGTTTGGTTTG
GGTACGTCCTTTTATAGAT

Sequence 71

GCGCGGCTGTGCGAGGGCGGGGGTCTGGGGCTGCAGGCGGGGCAGGGCTGGGTGGGGGCG
CGCGACGCACCTGCCTGCTTCTGCACGGGTGGNCCCCAAGCACTGCGGGGCCCCAGCCC
AAAGCGGACCTTGA

Sequence 72

CGCCCCGCGTCCGGGCGGGCTGGTGGGCGACCGGGCGCATCCTCATTGCATGTGCGGCGGG
CCTACCTCGGCCCTGGCCTGACCCCGGCGGCCCTGCCCGCCCCTCCCTCCAGCATCATGG
CCAGCCCAAGAACCAGGAAGGTTCTTAAAGAAGTCAGGGTGCAGGATGAGAACAACGTTT
GTTTTGAGTGTGGCGCGTTCAATCCTCAGTGGGTGAGTGTGACCTACGGCATCTGGATCT
GCCTGGAGTGCTCGGGGAGACACCGCGGGCTTGGGGTTCACCTCAGCTTTGTGCGCTCTG
TACTATGGACAAGTGAAGGACATTGAGCTTGAGAAGATGAAAGCTGGTGGGAATGCTA
AGTCCGAGAGTTCCTGGAGTCTCAGGAGGATTACCGATCCTTGCTGGTCCTTGCAGGG
AGAAGTA

Sequence 73

GCCCCGNCNTCCGGAAATGTCCGATTTTTTTTTAATTTAATGAAATTGTTAATGAGGAAAA
ATTTTTAATATAGGTCTTATCTACCACACATCCCCATAGATTTAAGGATTTTAATAGAAA
GTCATGATGTATGTATTTAAGCCACGTTAAAGAAAAAATATAACTATGGACCGGTATTC
AGTGAATACAGTTTCATGGTTTTTAATTCCTTCAAAGCACATTAAAAATGGTGTGCTGAT
AAACCCCAAGTAAATTAACCCTTTTCCGTATAAATCCATTTTTGTTTTGAAGAGGGGA
AATTATATTTATTGNTGTTTACTGAATCCTGGTGTGAAAGCATATCAGATATGTATGAAC
TGCTACTGCTGTACTTCCGATTTACGGACATCATTTTATTGCTATTTGTAGACCGTGATA
ACATGAACATGAGTCCTATTTATGTGGGCCTTCAGTGGATGGGCAGTGCCACTCANGTCT
CTGGGGGTTTTCTCTCTTAATTTTAAAGTAA

Sequence 74

AGTCGCCNCGCGTCCGTGTGTTTTCTCCTCGGTCCCCAACTCTACCTTCCCCAACCCACAGT
TCCTGTCCCCAGATGTCTGATGCCACCATGGCAGGGGAGCCCAATAGACTCCCAGGAA
CTTCAAGGAGTGTCAGCAGTTTCTGGCTATGTGTGACAGGGGTGAAACTTCCCAAGGGG
CCAAGTACACAGGAAGGACTTTGAACTACCAGAGCCTCCCCATCGCTCCAGAACAGACA
ACTCCTGGGCACCTGGTCAGAGACCAACCAGCATATTGGGACCAGATTCCTGACTACTC
CAGGGTGCAATCCTCAACTAACCTACACTGCCACACTACCAGAAAGAAGCAAGGGCCTTC
AGGTTCCCTCACACTCAGTCCTGGAGTGGATCTTTTTTATTACCCCTNCCACCCTNCCATT
GNTCATCCTGTGTACCCACCATCTAAGCAGTCTTCATGTACCCCTGAGGTCAAGCTTGGA
A

Sequence 75

CCCGCGTCCGGGCTGGCATGGCTCTATATAAGATTGTTGCANAAANTCCCTACTACTTTT
GGTCTGTGATGAGCTTAATTATGCAATCTATATNGGCACAGGATGAAAACCTCTCAAAA
CAATGTTTCTGCCCTTGCTGAGAGAATGGTCGAAAAAATGGTGAAAGAGGACAAGATAG
AAGCTGAGGCTGAAGTTGAACTTTATTATATGATCCTGGAACGTTTGGGAAAGTACCAGG
AGGCCTTGATGTCATCAGAGGGAAATTAGGAGAGAAGTTGACAAGTGAGATTCACAGTC
GGGAAAATAAATGCATGGCTATNTACAANAAGCTGAGCAGGTGGCCAGAGTGCAATGCC
TTTNCCGGCGCCTCTTACT

Sequence 76

GNTGGAGGGAGCTTTGCTACTCTGCTCTTGGCATGACTCCAGGATTTTTTCTGGAATCC
AACCTCTGTCTCTTAGGAGAAGGAACCTGTCTTGGTTCAGATGGCTGGGCATGAGGAG
GAAAAATTTCCATTAGTGTAGAAAAGTGCTGGACAGAATCCGGTTTGGAAAATTACAAATC
CAGTTGGTCAAAATAGGCCATTTCTATGTGTGACCTATTCGTGGTATGCCAACTGGACT
GCTTCCTAAACAGGACGAGGAAAGTGAGGAATATTTTTATATGAAAGCCTTAGCCTGTCT
GGCACCCTATGAAAAAACTATTTATGCACTCCTACTTTCACCCGTCTTTTGCATTCTCT

TABLE 1
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ATTTGTAGCACAAACAGAGTTGAATGCCACAAAACACCCCGTTTATAGTGAGCTGTTTTCA
GTGACCAATATCAGAAGGAGGCTTGCTTCTGGACTAGCCTACTAATTGCCAGCAGCCACC
ATTTTTCATG

Sequence 77

GGAGAGTGCCTTGCCGGACCCTCAGGACGGAGCTGCTGGGCTGCTACAGTGACCAGGACT
TTCTGGCCAAGCTGCACTGTGTGCGGCAGGCCTTCGAGGGGCTTCTGGAAGACAAGAGTA
ACCAGCTTTTCTTCGGGAAAGTGGGCCGACAGATGGTGACAGGCCTGATGACCAAGGCTG
AGAAGAGCCCCAAAGGCTTCCTGGAGAGCTACGAGGAGATGCTGAGCTATGCCCTGCGGC
CCGAGACCTGGGCCACAACACGGCTGGAGCTGGAGGGCCGAGGGGTGGTATGCATGAGCT
TCTTCGACATCGTGCTGGACTTCATCCTCATGGACGCCTTCGAGGACCTGGAGAACCCTC
CGGCCTCGGTGCTTGCCGTCCTGCGGAACCGCTGGCTGTCANACAGCTTCAAGGAGACGG
CCTTGCCACTGCTTGCTGGTCCGTCCTGAAAG

Sequence 78

CACGCGTCCGGAGAACGTGATTTCTCAGCCGAATGAGTTTGAACATACCCACAGGAAGA
TGACTTGGGGTTCAAGGAAGAAGATTTGGCTCCAGATCATGAAGTAGGAAATGCCTCTCT
CAAACCTGAAGGCATCCAGAACTGGGATGACTTATGGGTCCAGAGAGAGGGTCTAGGAAA
GCCTCAGCCTCGGGACAGAGGGCCCCCGGCTCCTGGGTGAACCACGCTGGGGCCAGGCTAG
TAGTGATCGGGCCGCTGTGTGTGGTGAGTGTGGCAAAAGCTTCAGGCAGATGTCAGATCT
GGTGA AACACAGCGGACCCACACAGGGGAGAAACCCTACAAGTGTGGGGTCTGTGGCAA
GGGCTTTGGGGATAGCTCTGC

Sequence 79

CGCGTCCGCAAGAAGATAACCCCAAACCTCTTTCTCAGAGAGTTTGTAGCCTAGTTTGGG
ATAGATAAGATCCACATATTTAGTCATATAAGACTACAGGAGAGTAGAATAGATGCACCA
GATGGTGTGCAATGAAAGTGGTACTTTGTAGACTATAAGTGCTGTAAATTCTAAAGGACA
GGTTACTTTTGCCTGGAGTGGTCAAGAAAGATTTTATTTAAAATAAGGATTTGACGGGCA
GACTTAGCAGTCAAAAGGGAGAAAAGCGGGTAAACAAATGTAAGCCATCATAAGAGTGCA
TGTGGTTTGAAGCATCAGGGAAAAGACTAGCCAACTGAAGTAAAAGGTTCTGTCAAAT
TGGGCAATCAATAGCATTAAGTTGGAACAGCTTGGGGACAGACACATAAGAGGGGCCAGA
GTGTGAATAATTTTCTAATACTTTATAGCACTTGACATTTACAGAGCACTTTTCTC

Sequence 80

TNCTCTTGCCCCCACATTCGTCCTCTTGATTCTCTGCTTCTCTAGCTCAGCCGCTGA
CCTTCGTGCTAGCCGCCACTAGTCCTTGACCAGCGTTCTGGCAACTCTTGCCCTCAAGT
TCTTCCAGCTCCAGGCTGAGCCGATGGGGATTGAGTTTTCTGACATCACAGCTNAGTTCT
TGATTTCTGCAGCAAAACCTTCAAGGCTTCCATCACCTCGGCTCTAGAGTCCATCATGCT
CCTCTCCTATGACCTGCTAGGGCTGATCAAACGTTCTGTCTCCTGCCGTGCCCTGCCCTG
CCCTGCCCTGAGCTTCGCTTAGCCTGTTGCAGGCTTTGTGTTTTCTTCTGTGCTGTTG
GACCACGCAGCTCCTTCTACCCATAAAACCCCTTCTCTAGGTCGGTGGAATCTTGGTC
ATCCTTCCGTGTCTAGNTAACTGGNACCTCCTCCACGAAAGCCTTCTAAAACTCCTT
CTCAGGGGAACTGGTTTTCTTTCT

Sequence 81

CACGCGTCCGCAAAATAGCCCCACATCCNGGCAAAAGGGGCCTTTCCCTTGGCCCAGAAG
AAAAAGGAACAAGTGGAGTGCAGAAGAAAATCTGTACTGAGAGACTTGGGCCTAGCTTGT
CTTCCAGTGAGCCAACCAAGGCTGGTGCTGTCCCATCCAGTCCCTCGACGCCAGCACCAC
CCAGCGCCAACTTGCCGAGGACTCAGCTCTGCAGGGTGTGCCCTCTCTGGTGGCAGGTG
GAAGTCCACAGACTCTTCAGCCGGTATCCAGCAGTCACGTGGCTAAAGCTCCAGTCTGA
CCTTCGCTTCCCCGCCAGTCCTGTCTGCGCATCAGACAGCACTCTCCATGGGTAGAGA
GCAACTCTCCCTTTCACTACTGTCCGCTAATTATAGCTCACCTTTATGGGCTGCAGAGC
ACCTCTGCCGCAGCCAGATATCTTTTCAGAGCAGCGGCAGAGCAAACATAGGCGCTTTC
AGAATACCCTAGTAGTCCTACATAAAATCTGGGTTGCTGGAGATCACTTTTGAAAACCAA

G

Sequence 82

TABLE 1
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ACGCGTCCGCACCCCTGTGTCCAATGACATGTGCACCCAGGTCGCCAAGCGGCCTGTGGA
CACCCAGGCCTGTAACCAGCAGCTGTGTGTGGAGTGGGCCTTCTCCAGCTGGGGCCAGTG
CAATGGGCCTTGCATCGGGCCTCACCTAGCTGTGCAACACAGACAAGTCTTCTGCCAGAC
ACGGGATGGCATCACCTTACCATCAGAGCAGTGCAGTGTCTTCCGAGGCCTGTGAGCAC
CCAGAACTGCTGGTCAGAGGCCTGCAGTGTACACTGGAGAGTCAGCCTGTGGACCCTGTG
CACAGCTACCTGTGGCAACTACGGCTTCCAGTCCCGCGTGTGGAGTGTGTGCATGCCCG
CACCAACAAGGCAGTGCCTGAGCACCTGTGCTCCTGGGGGCCCCGGCCT

Sequence 83

CCCCGCGTCCGCTCTTACGCATTACTCTATGTCTACTGTTATGGGTGTGTAATTTTATAC
CATAGATGTTTACTCTTTAAACAGACACTTCTAGTCTGTTTTATTTTATGTGTCTGGGAG
CGGATAAAGTGTGAGGTTTACGGGAGAAAGAGAGGTCTGTCTCAATGCCTTGGCACGGCAT
GAAGACAATCTCCCCTCCTTGTCCCCTTTCCCTGCTAGCTCCTGATGACTGACAGATTCA
CAGCAGAACAGAAAGGACTGGGAAGGGATGGAGGTGGGACATCTGGCACTGACCTTCAGG
GGCTGACCCTGTGGGGGAACATCTGCCCTGAAGAGTTGGAGCCTTCATGTGATGACACAG
AGCTGAAGTGTGATATTCGGGAGGGGATAGAGAGTGCTTGGAGGTTTTCTGATTTTGAAG
AATCCCAAGTCAGTC

Sequence 84

GTCCGGCCGCTTCCGGTCTCCCTCCCGGGCCGGCGCTGGCCTGACTGCGGCCCCGGTCCG
TAGCACTCCGCCCTCCGCTTCTCCCGCCCTGTAGCCGCGAAGACTGCTTCAGCCTTTCCC
TGTGCTGCCCTGCCGCGCGATGGAGACGAGCTCGAGCTGCGAGAGTCTTGGCTCCCAGC
CGGCGGCGGCTCGGCCGCCAGCGTGGACTCCTTGTCCAGTTAATGTGTTAAGAGCCATT
GACATTTGAAGATCATCAGAAAGTGAAGATAAAACATCTCAAAAATTATAATTGCCTCCAC
TTCTCATTACAGAGAATTCAGTGCATACAAAATCAGCTTCTGTTGTATCATCAGATTCCAT
TTCAACTTCTGCCGACAACTTTTCTCCTGATTTGAGGCCCATGCAGTCCAGTTCGGGAGC
TAAGT

Sequence 85

CCGCGTCCGCGTGAGGTGTGGGTGTTTCGTTTCTCAGGTAAAACATGGCTAAAAGCTTACG
GAGTAAGGTGAAAAAGAAAGATGCGTGCTGAAAAGAGAAAAAAGAATGCCCCAAAGGAGG
CCAGCAGGCTTAAAAGTATTCTCAAACCTAGACGGTGATGTTTTAATGAAAGATGTTCAAG
AGATAGCAACTGTGGTGGTACCCAAACCCAAACATTGCCAAGAGAAAAATGCAATGTGAGG
TAAAGATGAAAAAGATGACATGAAAAATGGAGACTGATATTAAGAGAACAAAAAGACTCT
TNTAGACCAGCATGGACNGTCCCAATTTGGNTGAACCCAAAGGCAAAANAAAAANGNTTG
ANGGCAAAACCGANNGAAAAAANGGGGAAAAACCAACCNAAANCCCTTAAAANGGGCCA
ANGGGGTTTGGCCNCTGNNAATNNTTTNAACCCNTTTGAAAACCCCCCTGGNNGANACC
NCCCGTAAAAATNTTCCCCCNNTTTTTTTTTT

Sequence 86

CCACCGCGTCCGAGGAGGGATCACCAAGCCGTGGGCCATGAAAGTCGGGGGGGGGCACC
GCAAGCTTGAAAGCTTCATCATTGACCTTTNCAAGAAATTACCGGGGCCAAGGCCGCTT
GTTTCNAAAACCCCATGGAACNAAACGANGGGGAGGCANGGGAGAACCACCCCTTG
GACTTTTTTTTNTTTCTTCTTGGACCTACCGAAGGAGGGCACAAATTGCCGGGAAGATT
GCTTGCTTTTCCACCTTGGGACAAGGGGATCCTGGGACTTTTCCGGCCCGGGGTTCCCN
TCCCGTTGGCCCGGCAAGGGATTGGGTCAAAACAATTGACCCAAGGGAAGAATCCCCGGG
GACGGTCACAACCGGGGNACCAAGGNAAAGCTTTTTTGGGANGGGAACCTTTTTTTTA
ATT

Sequence 87

CCGGGTCCCTCCCTGCGGAGCCGCTGGTCCGGCTGGCGGAGATGTGACCGCGGGCCCGGC
CGGCCTGCCTCAGGCGTCGCGTCAGCTCCCGTGTCCGTGCCCTTAACCCACACCGATGGC
GGGATCCGGCTGCGCCTGGGGCGCGGAGCCGCGCGTTTTCTGGAGGCCTTCGGGCGGCT
GTGGCAGGTACAGAACCCGCTGGGTAGCGGCTCCTTCNCTTCGGGGTATTCGGGTTTCG
CTTGTTGGGGAACCTTGGTTGGCCCCCGGGGCCCTTAAANCAGTTNTTGCCGCCAGAAA
CCACCGGGGTTGCGGCCTTTGCCGCCNAGTATGNTTTCGAAAAAAAAGGGCCGGGCTTG

TABLE 1
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NACAAGTTGCANGGGTCACAAAAACATCGTGAATTTTGATNGGAGTGGTTACAATCCAC

Sequence 88

CGTCCGTTTAATTATAACCTAGATTGTCTGGGCAACGGCAGGAACGGAGTGCCACTGTGG
AGCAGATAACTGCAGTGGTTTTCTAGGAGTGCGGCCAAAGTCGGCATGTGCGTCAACAAA
TGAAGAGAAGGCCAAAAAATGCTAAGTTAAACAGAAGAGACGAAAGATCAAAACAGAACC
AAAGCAGATGCATGAAGATTACTGTTTTCAATGTGGAGATGGTGGAGAGCTGGTCATGTG
TGACAAAAAAGACTGTCCCAAAGCATACCACCTCCTATGCCTTAACCTGACTCAGCCACC
ATATGGAAAGTGGGAGTGTCCGTGGCATCAGTGCGATGAGTGCAGCAGTGCAGCTGTTTC
CTTCTGTGAATTCTGTCCACATTCATTTTGAAAGATCATGAAAAGGGGGCCCTGGTTCC
CTCTGCACTGGAAGGCCCGCCTCTGCTGCTCGGAACATGACCCCATGGCTCCTGTGTAC
CAGAATACTGGAGCAAGATAAAATGTAA

Sequence 89

NGTCGCCCCGCGTCCGTAAAATGTAAAGTCCCCTAAAAGTGAATAAATTTTAAATACCTA
CTTTTAAAATACTGTCTTCTAAATTGACATAATTGCTTTTCTTACCAAAGAAGGAGAG
GTTCCCCTAATTCCTTTTGGGCCATAGATCCGCTTTTAGGATCTGATTAAAGATGTGGAC
TTTCAACGCAGGAAGATACCCATGGGCACACCATTCAAATGTATCAGATTTCAACGGTT
TTACAAACTCCCCCGGGATTAAGTCAAATGGGTGGATATTACAGCTGTTTTCATCAGATA
TGGTTATTTGTTGACAACCATCAGGACAACAATGTTTATAGATGGAAGGATAACTTCCTG
GTTTTTTCCACATTGAATGTGGCTAGTTACATATCTCAATTTAAAATAAATTGTGGA
GCCAAAAAAGTATGGTCAAGCTAACCTTGGGGTGGCTTTTACCTGATGCCTACAAGCACA
GAAAAATAGTTTTTAA

Sequence 90

CCGCGTCCGATTATGCCAAGAGAAGGTATTACTTTAAGATGTGAAAAATGTAAAATGGAA
AATTACATTACTAAGAAAAACAAAAAACACAACTGNNAATTAGAANTGAAAAACAT
TGCCACAAATGCAACGCACATACAAGTCATAAAGAAAAAAATAATTTAAATGAATAGA
AAATATTTAAGACTTAAGCTTTGAAGAACACAATTTAGATGCAATAATTTCAATTTCTCA
ACAAACAAGATTATGAGTTTCTAATCTTCAAACAAGTGATGGAATAGTGTTCCTGAAAA
AGAAGAAATCCATTTATTTGTTGATTCAAGATATATAGAAGCTGCTCAAAAAGATGCAAA
AAATGTACAAGTTCATTTATTGACAGCAGCTAATTTAAAAGATTTTGTAAAGTAGTAAAA
TTACTTAAAAATTGGTGTGAAAAAGAATACTTAACTTTAGCTGATTTTAAAAAACTTCA
AGCTTGATTTCCAAGTGCAGAATTTGTCAAATCAATGCGCAAAAATTAAGACTTATTA

Sequence 91

CCGTTGTCCCATATATCTTGTTCCAGCAGCCATATATCTTGNGGTCTACACGCCTAAAGC
ATGATTTCCCTTGAAGTCTTGGGGTGNNTAAAGGAGAGTCCCTTCAATATAAAACCTCT
GAAATATTAGTGAGAATGGCTCACTAATGTGAACAATGTTTAAATTATTTATTTATATAT
AGAATTACTGAATATTAGTACTGGGAAAATTTATAGAAATCATCTAGTCTTACCCTTCAT
CTTACATATAAGAAAAATGGTCTTTTCTTCTAATCACATTTACAAAATATGATATAAACC
TTGACCATGAATGTATGAGCCTAATTAGAGAAACAGAAAATCAGCATGTCAGTTTTCCTT
CATTCAAAATAACATAGTCTTTCTAAGCAGTCATTCTGGGAG

Sequence 92

ACCACGCGTCCGCAAGGCCCGCCCTTACGTA CTGAGCTCGGATCCCAGTGTGGACCT
GGA CTGCAATCCCGTTGCCGACTCGCGCTCTCGGCTTCTGCTCCGGGGCTTCTTCCCTGC
CCGCCCGGGGCCCTGACCGTGGCTTCTTCCCGGCCCTGATCTGCGCAGCCCGGCGGGCGC
CCAGAAGGAGCAGGCGGCGCGGGGGCGCGCTGGGCGGGGAGGCGTGGCCGGAGCTGCGG
CGGCAAGCGGGCTGGGACTGCTCGGCCGCTCCTGCCCGGCGAGCAGCTCAGACCATGTC
GCCTGAAGAATGGACGTATCTAGTGGTTCTTCTTATCTCCATCCCCATCGGCTTCTCTT
TAAGAAAGCCGGTCTGCGGCTGAAGAGATGGGGAGCAGCCCGCTGTGGGCCTGGGGCTCA
CCCTGTTACCTGTGGCCCCCACACTTTGCATTCTCTGGTCACCATCCTCGGGACCTGGG

Sequence 93

NCGCGTCCGCCAAGATGGCGTCCNTCATGGAAGGGCCGCTGAGCAAATGGACTAACGTGA

TABLE 1

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TGAAGGGCTGGCAGTACCGTTGGTTCGTGCTGGACTACAATGCAGGACTGCTCTCCTACT
ACACGTCCAAGGACAAAATGATGAGAGGCTCTCGCAGAGGATGTGTTAGACTCAGAGGAG
CTGTGATTGGTATAGACGATGAGGACGACAGCACCTTCACAATAACTGTTGATCAGAAAA
CCTTCCATTTCCAGGCCCGTGATGCTGNTGAGCGAGAGAAGNGGA

Sequence 94

ACGCGTCCGCGGACGCGTGGGTGCGGGCCGGCCNCCCTGGACGAAAGAAGAGGGGCCCTC
CAGGCCAGTCTGGGCACCCTGGGATAGCGGCTGCAGCCAGGCATGGCCGACTCTGCACAG
GCCCAGAAGCTGGTGTACCTGGTACAGGGGGCTGTGGCTTCCTGGGAGAGCACGTGGTG
CGAATGCTGCTGCAGCGGGAGCCCCGGCTCGGGGAGCTGCGGGTCTTTGACCAACACCTG
GGTCCCTGGCTGGAGGAGCTGAAGACAGGGCCTGTGAGGGTGAAGTCCATCCAGGGGGAG
GTGACCCAGGCCCATGAGGTGGCAGCAGCTGTGGCCGGAGCC

Sequence 95

CCCCGCGTCCGAGGTGACCTCCTTGGCCCAGATCATCTTAGAGCCAAGAAGCAGGACCAT
TCGTGGTTTTGAGGCCCTGATTGAAAGAGAGTGGCTGCAGGCTGGTCACCCATTCCAGCA
GCGCTGTGCACAGTCAGCCTACTGTAACACCAAGCAGAAAGTGGGAGGCTCCTGTATTTCT
TCTCTTCTGGACTGCGTGTGGCAGATCCTTCGTGAGTTTCCCTGTTCTTTGAGTTTAA
TGAGAATTTCTCATCATGCTCTTGAGCATGCTTATGCCTCACAGTTTGAACATTTCT
GGGCAACAATGAAAGTGAAGATGTAAGTTGAAGCTACAGCAGAAGACGATGTCTTTGTG
GTCCTGGGTTAATCAGCCCAGTGAGCTGAGTAAATTCACCAATCCCCTCTTTGAAGCCAA
CAACCTTGTCATCTGGCCTTCAGTTGCTCCGCAGAGTCTTCCACTGTGGGAAGGTATTTT
CCTACGTTGGAATAGATCCTCTAAGTATTTGGATGAAGCATATGAAGAAATGGTTAACAT
CATTGAATATAATAAGAATT

Sequence 96

CCGCGTCCGGTTTNCCTGTTGGTTAGGCTGGTCTTGAACCTCCTGACCTCACGATCTACCC
ACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCCTGAGCCACTGCACCAGGCCACCCTG
TCTCTATTTTCTAAAATAATAAATCTGATTTTAATGTGGCTGGATATAAATCATATCACA
GTTGGATTTGGAAGTTTGGGTTTTATTCCTAACTTTGATGGGAAGCCATTTTAAGCAGAA
AGATGATTTTAAAAGACCACTATATTTCTGTGTGAAGAATGAACTGGGAGATTTTCATAG
TATTATTAACAAAAATAGAATAGTTGGGGATCTGGTTTGGCTTGGGAAATGGAGGAAGTT
CAACTTTGGGCATGCTCCATTTGCATTGCCAAGACATTGCAGCAATTGGAAGTGCAGTCA
GAGAGCTTAGGAGAAACACTTGGCAGATGGACATAGAGAAGTAGTACTCAAAGCTTGTGG
ACATTGATTAAATAATCATACAGGAGTATGGGCTGACAAAAGATTNCAAAGAGAAAACCT

Sequence 97

GTCNCCACGCGTCCGGGACTCTCGGCCCTGGAGAAGGAGGTGGACTTTGACTCCGACCCC
ATGGAGGAGTGCTGCGGATCTTCAACGAGTCCACCAGCGTCAAGACGGAGGACAGAGGC
CGGCTGGCCCGGCAGCCCCCAAGGAAAAGAGTGAGGAGAAGGGGCTTTCGGGTCTGACC
ACTCTGTTCCCCGGGCAGAAGAGGAGGATCTCCACCTTTCCAAGCAAGGCCAGGAGGTG
GAGCCCCCGAGGAGGGGTCCCGCGGTGCCCCCGGCCCGGCCCGACGGCGCAGGAGGTG
TGCTACCTGCGGGCCAGCAGGCGCAGAGGGCATCGGCGAGCTTGCTGCAGGCCCCCGCC
AGGCTGGCAGAGAAGTCGCCCTNCGTCCACATTTCCCGCCCCTGGCGAGAA

Sequence 98

CGCCNCGCGTCCGGCAAAGCAAAGGGGAAATTTTGGTGGATGGTAGCTCAAAATTGGA
ACTCTTGTTCTAATTCAGTTACATTGGCTTTACCCTCCTTAGATTTTTCATCAAAGGGCT
GTCCCATTCGAATCTTACTAAAACATTTTGTAAAATAAACTCTTTTCTTTTATATTA
ATAATTAGGCTTTTAAATAAAGATGTTATTCCTTTAAAATGGTGGGCTTACCATCATTGA
AGATGTCACTCAGGTGGCCTTGCTTGATCAAAACGCCCTTTTAAAAACCAAGCTTTAAA
AACATGTTTATAATTTTCATGAAGTACATATATATTGTTCCCATAGTCTTCAGCTTTAAAA
CTATAAATATGCCCAAATTTTGTATTTGCCCTACTTTAAGTAGGTTTATTGNGTTTGT
TTTTCAAGTACTTGTTTTCTCTGATAAGACTCAGGAATTCTGAAATGTGAAATGNCT
CAATT

Sequence 99

TABLE 1
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CNCGCGTCCGAAATCGTTGCTACCAANTATTCAAACCCCTTTGAGTTTACATACTAGTTA
CCTTAAAAATTANTNCCTGACNCTCNTGANTTTGGNGGAAAGCCCTTGTNTCNNCTCTC
TNATGNACTCTCATGGGTTTTTTTGTATGATTTGAATATNAATGTGCCTAAAGAATTTT
GCTCTCTTAATCTATGNATACATACTTGAACAAATCATTCTTGCTTAACTGCTGATCTTT
TGTAACACTATTG

Sequence 100

GCCCCGCGTCCGGCTGGAAGCAACAGTTTGGCAGCCTGGGGTACACTCAGGTTATTGTT
ACAACTATTATTATTGATGTCTTTTTTAACTCAGGTCATCCACTTTTACTGTCATC
CATGGAAGAGCTCTTATTAAGCAGGCTCAGACTTTGGGACCTATGATTCTTTGGCACAAC
CTTTTGGAAAATTCTTAAGCAGGGATGAAGCAAACCTTGATTGGAGTTGGGGAAAAAGAAG
ACAGATTAGTATTTTTCATGCTGACAAAAAATAGCTGCTATGACTTTTCCGCAACGTGG
ACAGGGGCCAAGTGAAGCTGAAGTGGTCTGTCGCCAGTGTCCCTTGTCTGTCG
GCGATTTTGGCCCCGACCCTTCTTGGTGGGCTTAGTGGTGGCAATCTGTCTCTTCTACCA
GACTCTGACCCTCCGAGGGTCCGAGGAAGCTCACAGCCGCTGCCCTGGGGCTGTCCACA
CACATCCACTGAAA

Sequence 101

CCACGCGTCCGGGCGTCTCGGCTCTTCTGTATCTCCCTGGCCTGGTCTGCTCGGCTTCT
GGGCCTCGCCCTTCTGTCTGTGAAATGGACTCTGGGTGAATCCAAATGGGATCGTCTCG
GGCTACGTCTGTCCCTCCGGGACTACAAGTCCCAAGGTGCTCGAGGCGACCTTGGCTCC
CCCTCCCCACCGGGACCCGCTCCCTCCAGCCCAAGTCACGTCTGCTAACCTGTTCCAG
CTCCTGCCCCGCCCCGTTCTCCGCTCCCCAAGCCGGAGCCCGAGCTGGAGGAAGCCCCCA
GGTGCCAGGATCTGCTCGGATCCGNGCCCGCTCCGGCCGGCACCATGGACAGTGAGGCAT
TCCAGAGCGCGCGGACTTTNTGGACATGAACCTTTCAGTCTGCTGGCCATGAAACACATGG
ATCTGAAGCAGATG

Sequence 102

CCACGCGTCCGGTCCGGGGTGAATCACGTCTGCGGCTGCCGACGACCCACACCCGGC
CGGCCGCTCCGCAGACCCACCTTGGCCGCGCGGCAGGGGGCGCGCAGAGCCCCGAGGGA
GCGAGTCCCCGCGCGTGGCAGCTCGGCGGCTTCTCCCTTCCGGAGGTCCGGCTCCCGGCT
CTCCGGACCCGCTGGCGTCTCGCCTGCGGCGGGGCGGACGACAGCGGCGCCAGGAAT
GGCTTCCGGCGGGCAGCGGCATGGAGGAGGTGCGCGTGTGCGGTGCTGACCCCTTGAAGCT
GGTCCGGCTGGTGTGCATCTTCTGGCGCTGTGTCTGGACCTGGGGGCGGTGCTGAGCCC
GGCCTGGGTACAGCTGACCACAGTACTACCTTGTGCTTGTGGGGAGTCTGCCGAAA
CCCGCCAGCTTGGACATCTGGCACTGTGAGTCCACGCTCANCAANCATTGGCAGATTG
C

Sequence 103

NCGCGTCCGAGAAATTGCAATTTTTTAATTTTAATTTTAAGAGGAATTCGTGCCAGAGA
GAACTATTAAGAAAGGGGTATATCCAGTCTAAGGATTATTAGGCTCAAGTCCATGAATAG
GCTCTGGGAAGTTTGTAAACACTTGGAAATTATTTGCAAATGTGTGTGTGAATGTGCTT
TACCTTANAGAGTTCATGAATTTTATTAGATTGTTGAAAGAGTTTATGATTAACAAAGG
AAAAACAAACCACCACCATCACATAACAAAACCACAACAGTGATTTAATCTTTTACCTA
ACAATAAGTAAATTGAGGCTCTGATGGCTAAATTAATAGCCTGAGGCTACACAGTCAGTG
GCAGAGCCAGGGTANAGAGAGAACCAGCACAAGCCATTGTGGGAGCCGAGGGTAAAGAG
AGAGCTAGGTGTTGTACCTTAGTAAATAAATCAGAA

Sequence 104

GNGTCGCCCCGCGTCCGGAAGGTGGAGACCGCTTACCCTGATCNGGGATGTATCGGCTGC
GGGTGCGCAAGGCAGTCCAGGAGTGACCTGGGGCTGTGGAGAGCGACCCGTGGCCTTGTG
TTTCAGAGTTTACCACCTAGGATGACTTCAGTGACTAGATCAGAGATCATAGTGAAAAA
GGACCAGTGATGTCTAAGACTCATGATCATCAATTGGAATCAAGTCTCAGTCCTGTGGAA
GTGTTTGCTAAACATCTGCCTCCCTGGAGATGAATCAAGGCGTTTCAGAGGAAAGAATT
CACCTTGGCTCTAGCCCTAAAAAGGGGGAAATTGTGATCTCAGCCACCAGGAAAGACTT
CAGTCCGAAGTCCCTTCATTTGTCTCCTCAAGAACATCTGCCAGTTATCAAGACAGGAG

TABLE 1
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GCAATCCTGGCGGCGAGCAAGTATGAAAGAAACGAACCGGCGGAAGTCGCTGCATCCCAT
TCA

Sequence 105

CGTCCGCGCAGCGCTTGAATCCCGTGGCCTAACCGTCCCTCGGAAGACCGGTCCCGCTCG
GGAGGCTCTGCAGTCGCGCCTGGGGTCAGGGCCGGGGCGAATGTGGCTCGCGTTCTAGG
CCTCCCTGGGTTGAAAAAGACTATGTTAGCAANGTGTACGCCATGCTTTTGCCAACTT
TCCAATTAAGGTTGACATTCTGCATAAGCATTCTCTGTGAAAATGTCTTGCCTCTT
ACAGAGGAGCAGAGGAAAAAGATTGAAGAGAATCGACAAAAGGCTCTGGCCCGCAGAGCT
GAGAAGTTATTGGCAGAACAGCATCAGAGGACTAGCTCGGGCACCTCCATTGCTGGCAAC
CCATTCCAGGCCAAGCAAGGCCCATCCCAAATTTCCCAAGGGGAGTCTTGTAAAGGCCAA
GTGAGCCATTGGTGTCAATTTCAAGCAACAGAATCTCAGTAGCTCATCTAATGCTGACCA
AAGACCTCATGATTCCACAGTTTTCANGCAANGGGAATATGGAAA

Sequence 106

CCGGCCCTATCCCTATATTGTTTGCTTGTTTGGGATAACCTAAAATTTTTATCCAGTTT
ACTACTAATTTGTTTTACCTGATGTATCTTCTCTTCAATAATTTTATGTTACCTTCTGT
TTAGAATAATATTTGCCACAGATATTTAGGTTTAATTCTGTGTTTGAATGATTCCAATGC
CTTTCTCTACCCACTTTGAACACTTCATCCTGGAATGGTTGGCTGATGTATGTCTCTAA
CAATTTTTTTTTAGGAGAAGGTATGTGGGTAATGTAATTCCTAAACCTTTGCTTTTCTG
AAAAATCTTTCATTTGCCTTTATACATGACCAGATTTACTGGGTATATAGATTTGTTGAT
GAAAAAAGGTAAAAAGAGCAACTTTTGACATCCAGAGGTTTGTCTGGCACTCACAGCTAG
CCCCGTGTTATTCTCCCTATT

Sequence 107

GCGTCCGTCTNAACCCTAAAGCTAAAAAGTCATTGTGAACCTTTNNGGTCTGATGCTAAAG
AAGGGAAAACAGGTACAGGAAATCCCATGTGGATGCTTGCTTNCAGGATTTCCCTGCCATG
ATCCAGAATCCACAGCTNCAACATGATTGCAAAAAGACTCCCTGCTCATTTTNCCTCA
GCATGCACAGCGCTGTCTGTCTCAGTTGCAACTCGACAGAGCCGCATTTACTCCAGAAC
CCAATCCACACACCTGCTCATCCTGCCCCGAGAGGAGTGCCTGAAGCCAATAGCAGGGAA
CTAGAGCAGACTTGGGTGGATCTTCATTGGATATTAGGTATCTTGGCCTAGATAGGCAAG
CAGTGGCCTTACAGATGCTGACAGATGATCTGATTAGATGCACAGNTGCTGGGTGGCGTC
TGGGGCCAGTCTATTGGNCAGTTCTGGGAGNGGGAACCTATTGGGCTCTGCAAAGATG

Sequence 108

CGTCCGCTCCCTGGCCCTGCTCCGGGAGCTGTCTGTTGTCTCCGCCAGCAGCCCTGTGGCT
GCAGGAGCGCCAGGCCAGCTTCGCCACTCGCTGCCCTGCAGAGCTTCCTGCTGAAACC
TGTCAGCGCATTCTCAAGTACCATCTGCTGCTGCAGGAAGTGGGAAGCACTGGGCGGA
GGGCCCAGGCACTGGGGGTGCGAGATGGTGGAGGAAGCTATTGTGTCCATGACAGCGGT
TGCCTGGTACATCAACGACATGAAGCGCAAGCAGGAGCATGCAGCGCGCCTCCAGGAAGT
GCAGCGGCGGCTGGGTGGCTGGACCGGACCAGAGCTCAGTGCTTTTGGGGAAGTGGTGTT
GGAGGGCCGCTTCGAGGAGGCGGANGGNGGGTTGGCCCCCGGCTACAAGGGGGT

Sequence 109

AGAATTGTGTATGCCTTGCTATCACGGTACAGCACGAAGCCAGGCTCCTTTCTCCACCA
AAGAAGATGGAACCAGACTGGAATTCTGTCTCCAGAGAGAAACCCAGCTGTTTGGGTCAA
AGACAGATGCTTCAGACTTGGGTGGGAAGGTGAAAGATGGCTATTTAGAAAGCTGGTGGC
ACGTTTTACATAAGGGAATGTCAGATGGGAGATGCTAGTTGCCATTTTAACAAAGCAGGT
AAATCGGTAAATTTAACTCTGTCCATGTTCTGTTAGAACTCAGGGACAAGGGATCCAT
GAAAAAG

Sequence 110

ACGCGTCCGCACGGAGAGAACTGGNCCTGGAGCGGGGGCGGGGAGGGGGCGTCGTGN
TGGGTACAATTGCGCANGGGCAAAGGTGAGAGGTGCGGCTGNCGCCGTTTTATTGAAG
ACATCGTCCAGTTCTGACCATGGACTCNCAGCCATCGGCCCTTAGTTTCCATTCCCTCTA
GNGGGCCTTCNGAGGGNTCTACTGACGTACCTCCTTCCCTTGGTACCGGACCGGGGAAGT
GTTTTCGGGCGCGGGAGGTTCCGCATGCCAGGCCTGGCCAGGGGA

TABLE 1
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Sequence 111

CGGGCCCTTAGTCCAAGCCTTGATCGGCGACTAAGTGACGGCAGTGACTGCCGCCATGCC
GAGCTGGACGGAAGNCACTTCTGAGAAGGGCGGAAGTGTCTCGGGCTCCTTAGAGGGAGG
ACACCATATTAGTGCCAGTGGGGAAGTCACCGGGTGAATTACTTCTTTGTGGAGTTTGT
GCTGTAGCGACAATGAAAAACGAAGAGTCAACTTTTATAAAACAAAATAAAAATTAAGTC
AAATCATGCCAACCTTTATTAGATCGGCTAGCAGGGTTAACTTAATTCAAAGCCCCTGA
TGAATCGGGCCTTCATTGCACCCCCAAAGGCTCCGCCACCCTGATT

Sequence 112

CGCGTCCGGGCGCCGGTACGCCTGGTCCCCGCGTGGAGTCTTTACTCAAACAGCTCCCG
CCTCAGGCCGAGATGAGGAGCCCTTCANAATAGCTGCTGTCTCTGGGNGGACCCGGGCGT
CCTTGGCAGCCCAGCTGNTCTGGACAAAGCCCTGCCAGTCAGGCCTCCGCTGGCAGGAAC
CATGGCAGAGGCTGGGGATGCTGCGCTATCGGTGGCCGAGTGGCTGCGGGCATTGCACCT
GGAGCAGTACACGGGGCTCTTTGAGCAGCATGGCCTGGTGTGGGCCACTGAGTGCCAAGG
CCTCAGCGACACCCGCTGATGGACATGGGCATGCTACTCCCT

Sequence 113

TGTCGACCCCGCGTCCGCGGGANGTTCATGGAAACGCAGGACACGACAGAATTGTGTNTG
CCTTGCCTATCACGGTACAGCACGAAGCCAGGCTCCTTTCTCCACCAAAGAAGATGGAAC
CAGACTGGAATTCTGNCTCCAGAGAGAAAACCCAGCTGTTTGGGTCAAAGACAGATGCTTC
AGACTTGGGTGGGAAGGTGAAAGATGGNTATTTAGAAAGCTGGTGGCACGTTTTACATAN
GGGAATGTCAGATGGGAGATGCTNGTTGCCATTTTAAACAAAGCAGGTNAATCGGTNAATT
TTAACTCTGTCCATGTTCTGTTAGAACTCATGGACAAGGATCCATGAAAAAGACCTGTG
ATGTTTCNTCTGGCGCTTTACTGGCCTGGGCACACCTACCAATCTTTTAGGATTTGACTG
GTTCCATTACATTCCT

Sequence 114

GTCGACCCCGCGTCCGTATCACTGTAATTTAAGGAAAGAAAACCTCAGTTCTGCCTCTGG
ATACCAAGATGCCCATTGCTCAGTTCAGACAACTGATATTAATAAAGCTATGCTCCTT
ACTTACTTCTTTTATTATAAAACAAATTCCTTTGCTTTGGCTGATACTAGCTGAGTCATTG
ATCATCATTGGTACCATGATATTGTAATCTATGCTGCTATTTGGCACAAGACTGAAGTTC
ACACTACAGTAGAGAATACTATAAGATAATTTGCAATAAATACTGATAATAATAATACCA
GATATTTTAACTAACTTTTTCTACCTTTATTAATAGCAATCAGCACACTTGAATGTGTAA
ATTTACAGTAACTTTAGGCAGAACTTAAGCTCCAGGCCACATTTGTATAAGAACACCAA
GTATTCAAGGCATAAAGTCTGTTGTAAGCCAAAAAA

Sequence 115

AGTTCAGTCTGCAGCAGTCCCTGCACCCACTTCCCAGTTGCTTTCATCTNTGGAAAAAGA
TGAGCCCCGTAAAAGTTTTGGCATCAAGGTCCAGAATCTTCCAGTACGCTCTACAGATAC
AAGCCTTAAAGATGGCCTTTTCCATGAATTTAAGAAATTTGGAAAAGTAACTTCAGTGCA
GATACATGGAACCTCAGAAGAGAGGTATGGTCTGGTATTCTTTCCGCAGCAAGAGGACCA
AGAAAAAGCCTTGACTGCATCAAAAGGAAAACTTTCTTTGGCATGCAGATTGAAGTAAC
AGCATGGATAGGTCCAGAAACAGGAAAGTGAATTTGATTTGCCCCCTTGGATGAAAGGA
TAGATGAATTTACCCCCAAAGCAACAAGAACTCTNTTTATTGGCAACCTTGAAAAAAC

Sequence 116

CCCGCGTCCGCACCAGGCCCGAGTCTTCCCTTCATGGAGGGTGACGTGAGCAGCAAGGAT
AAGATGGGCAAAGGAGTGGATGGGACATATAAAAAAGCTCTTCAGGAAGCTGCAGCAAGG
TTTGAGGAATTAAGGCCCAAAAAGAGCTAAGACAGCTGCAGGAAGACCGAAAGAATGAC
AAGAAGCCACCACCTTATAAACATATAAAGGGTCTCCCTCTGTGACCCAGGCTAGAGTGC
ATTGCTGCAATTTTGGCTCACTGCAACCTCCGCTTCGTGGGCGCAAGTGATTCTCCTGCC
TCCTGCCTCAGTCTCCTAAGTAGCTGGGATTACAGACATGAGCCACCAACGCCTGGCTAA
TTTTGTGATTGGCAAAAAGAGATTTTGTGACACATAAAGATGATATGAAATTCACCTT
CAATCAAGTATCCAGAAAATTTA

Sequence 117

CCACGCGTCCGGCCCTTGCCCCTGTNCACANGAATGGACCCACGGCCCCACCCAGCGCC

TABLE 1
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GTCAGCGCCCGGCACTGCCACCCGGGTCCGGGCCGCTGCCTGCACGTGGGATCCGTCCGG
CAGCCGGGGACAGAAGAGACCCCGCCGTTGGGACGCAGGGCAGAGCCGGCCACCTAGTCC
CTTCAGCCAGCAGAGGCGAGGGAAGGCGTCACTGCCCGGCGGGGAGACGGGCAGGACG
CCCTGCCCGGCACCAGCAGCCTCCGCCGGGGCGCCCTCAGCTCCCTGCTTGGCTCTGTCT
CTCCACACCCGGCAGGGCCCGCGGGCTGCCCGAGCCTGGGGGGGTCTGGGCAGCTGCTA
CTCAGTGCCAACCCCGTGGGGCACAGA

Sequence 118

NAGGGAGTCGACCACGCGTCCGGTGCGGAGCAAGCATCACACCATGGCGTATGAGTGTTT
CTCTGTGTAGACTCAACCTGCGCCTCGCCGTCCCCATTGCGACACCCGATGCCCGGGG
TCGCTACGGACTTAAATCTCCGCACCGCACCTCCACCTCAGAAACGTTCTGGATCCG
AACACTGCCCCCTGACGACCTAGAGAGATCCCGGCTCCAGCCCACTGAGTGGCTTCAGC
CTCGCTGGTAGGTCTCTCTCCAAAGCTCTGGAAACAGACTCCTGGGAGTGANGGTAGNG
GGGGAGCNGCAGGCACCGCCCCCTTTCCCAAGTCNCCGCCCACTTCATCCCTCAGGCA
CCTNCCAACCTCCTGGCCTTNTCTGCACGAGGCGCCTGCCCGGGGCCCGCCTACAGGGGA
CCCAGCTCTTCTTGACGCCATTGGAAGNTGATCACCTGGGAGGTGA

Sequence 119

CACGCGTCCGGTTTTACTGCTCTTTGCCATGTGGTAAAAAGAGGCTGAGACATATTTAAG
AATCCAAGAGGATATTATGTGTCAGAATTCAGACACTGATGAGAAGTTTTTAATTGTT
CTTTTTATTTGATTTTGAATTCAGGTGCACTCTATTCAAGTGCAAGGATATCAGAAGT
TTTTTTTTATTTAAAAAATTTTTTTTCGAGATGGAGTTTCACTCTGTTGCCAGGCTGG
AGTGCAATGGCAGCTTACTGCAACCTCCACCTCCTGGTTCAAGCGATTCTCCTGCCTCAG
CCTCCCAAGTAGCTGGGGATTACAGGCACCGCGCCAACACACCTGGGCTTATTCTAATT
TAAGTAAGAAAATGGGAAGTCTTACCATNTTTGGTCAAGGCTTGGGTCTTGAACCTNC
TGACCTTAANGGTGATNCCACCCCANCTTTGGCCTCCCAAGCCGTGCTNGGGATTATAGG
GCATGAAGCCCACCCANGCCCGNCCAGGATTTTTATATTTAAGCCCTTCTTGCTCTTN
AAAAAAAAAAAAAGGT

Sequence 120

NGTCGCCNCGCGTCCGGGAACCTACCGGTACCGGCCGCGCGCTGGTAAGTCGCCGGTGTG
GCTGCACCTCACCAATCCCGTGCGCCGCGGCTGGGCCGTGCGAGAGTGCGTGTGCTTCTC
TCCTGCACGCGGTGCTTGGGCTCGGCCAGCGGGGTCCGCCGCCAGGGTTTGAGGATGGG
GGAGTAGCTACAGGAAGCGACCCCGCGATGGCAAGGTATATTTTTGTGGAATGAAAAGGA
AGTATTAGAAATGAGCTGAAGACCATTACAGATTAATATTTTTGGGGACAGATTTGTGA
TGCTTGATTACCCCTTGAAGTAATGTAGACAGAAGTTCTCAAATTTGCATATTACATCAA
CTGGAACCAGCCAGTGAATCTTAAATGNTCACTTAAATCAGAACTTTGCCNTTAANAAAG
AAAATTGGGGNGTCCTGGGTTTA

Sequence 121

CCNCCCCGCGTCCGATCAATTCTGGAATTTATGGTTATAACTTCGAAACAGAAGATGGA
CTAATTTTATTTTATCTAATTTTATTGTTGGAAATTTAGGAATTTACGGAAATACTAAT
TTAAATTATTTAAAAAGATCATTAGAATCAAGTAAACCAATTTTGATGGCTATGATTGAC
TCAACAAGAGCTAATTATCCAGGTAAAACAATAGATAAAATTTTGCTAAAAAGTTTTTA
GAAAAAACATTTTAAACAACAAATCCACTTCAAGAATAATTGTCGGAGCATACGATGAA
GAGATGCTTTCAATTCAAGAAATCCTTGATTTAGCTTACAAATCAAACGTAAAGGTTGCT
GTATATGGNAGAAATTATGACAATCTTTTAGAAATGAATCAACGATTAGCACAAAAACAA
AATCTTGAAATACATTATCCAGAATTTTTTGATTTAGGCAAGCTAATAAAATCGATAAT
TTTGTAATCTTAATTACATCAACACCTGGAGCGAATTTACCAAAGATTTTTTAGAAT

Sequence 122

CGCGTCCGCGAAACTGAGAACCAGTTCTCCCGAAGCCGCGGGTCTCCGGCCGGCGGGCGG
GGCGGCGGCGCAGGTGAGCAGGGCAGGGGGCAGCCGAGGGAGCGCGGGGAGCGGGGGCCG
GGGGGCCACGTACGAGGGGCTGCAGGCCAGCCGGGGCGGGACTCGCCAATCCTGCGTCC
CCAGCTCAGGACGCGGACGCTGATCCGAAGCCCCTGGCCCCGGCTGGGTGAGCACTGGGA
GAGCAGGCCAGGTCCGCAGCCCGGGTGTGGGGCCCTCCCCAAATCCAGGGAAGGATCG

TABLE 1
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TGGAGCGGGGTGGGGACTGAAAGCCATTTCTTTCCCGTGAAGAATTTTATCAGTGCAA
GTAACAAAATATT

Sequence 123

CGCGTCCGCTNAAAAAATAATACCAAAAAAAGTTTTGTAAAGACAACGCTCTCGCTGT
GTTGCCCGCCACTGTGGCCTCCTTAGCTTCTCCCTGGGGCCTGCTGGACCTTTCCATA
CTCCAGAACTAAAGGGGGTCCAGGACCCTGCTTNAACCCTAGGATCCCGCATCTTTTT
TTTTTTTTTTGGACGCAGGGTCTTGCTGTGTCCCTCAGGCTGGAGTGCAGTGATTCACT
GCAGCCTCAAACCTGTGGGCTNAAAGTATTTCTTTAGCCTCAGCCTTNTAAGTAGCTGGG
GACTACAGTCATACCAACATGCCAGCTAANTTCTTTTTTTAATTCTGTAGAGNA
TGTTTGAGACGGCTTGGGCTNTGTTGCC

Sequence 124

CCNCGCGTCCGTGCTGATAAACTCCTTTGACCTGACGATTGCTCTAAGTCCTAATTGCC
ATATTTATATTCCCATAGTAAGAGTGTTTGGAGATAGTGTTGAGCTTTTTTGCTGGTGT
TAAAAATGCATAATGAAAGATGGCACNAGAGAGGCATATTATATCCAATTCATGAAGTTG
TTTGTTTAACAGAAAGCTTATTTAATCACTTAACATTGTTGATTTGTCTAATCACAGT
AGCGCTATTGATTAGGAGCCTGACCTTTANATGGTTGACTTGTGAGTGTATTCAATATGG
TGAAATAANGGTGTTTGATATATGGCTGCAGATTTAGAAGGTGTCATTAGCAAAGGTAT
ACGGAATAAAATANGGGTTATAGTATTCCTTACTCAAATTCTGTATGTGCTAGAGCTGGC
TGGAGTCTGTTGGCATGCTCATTTGGTGTAAGGNCCGNTAAGGACTATGCT

Sequence 125

GCCCCGCGTCCGCACTTTGTATTGATAACTTAAAATGGCATCAGTTTATCTTAGACATCA
GCTTGCTTTTTATCTCCTTTTTTAGTGAGTAAAATAGAGCAACTAGCATGCCTGTGTTCC
CAGCTACTTGGGAGGCTAAGGTGGGAAGATCAATTGAACCTAGGAGGTTGAGGCTATAGT
GAGCTGTGATTGCACGACTGCACTCCAGCCTGGGCAATGGAGTGAGACTCCTGTCTCTAA
AACAGCAACAACAAAAATAAGCAACCATAGTGCATAAGGGAAATTAATGTTCCCTATA
GAAATATGTGTATGTCTGTGATAAGTGGTATGCAAATGCTAATTATTTATAAAATAAAA
GTTTCAGAACTATTCTTATCATTGCCACTTGAACAATTAAGGGTTTGCTTTATTTCTAA
TGTTTAATAGGAACCCCTTGCTTCAAACAGCCTTGTTGAAATCATGTAAAAATTTGTTA
ATAG

Sequence 126

CNCCACGCGTCCGGCGGCCAGCCGCGCCTCCCGTTCTCCCCTCCGCAGCGGGCGGCGGT
GGCGGAGAAGGAACTCGACACGCACCGACCGCCCTCCCGCCCGAGCCGAAGCGGAAGCTG
TAGCCCGCTCTGGGCCGGGGCCATGGGCGCCCCGCGCCCGCCGGGTCATGAGGACGGAGG
CGGAGGCAGCGGGGGCCCGCTCGAGCCCGGGGACTTTGTGCAACTGCCTGTGCCCGTCA
TCCAGCAGCTCTACCACTGGGACTGTGGCCTGGCCTGCTCCAGGATGGTGCTGCGGTACC
TGGGCCAGCTGGACGACAGTGAGTTTGAGAGAGCCCTGCAGAAGCTGCAGCTGACCAGGA
GCATCTGGACCATCGACCTGGCCTACCTGATGCACCACTTTTGGCGTGAGGCACCGCTTC
TGTCACAGACCTGGGGTGTNGACAAGGGCTACAAGAACCAGTCCTTCTACAGGAAGCACT
TT

Sequence 127

CNCGCGTCCGCGGTGCGGTGGGCGGACGCGNGGGTTCGTCCTGGACAAGTCTGGGAGTGT
GGCAAATAACTGGATTGAAATTTATAATTTCCGNNAGCANCNGGGCGGAGAGATTGNGT
AGCCCTGAAATGAGATTATCTTTCATTGTGTTTTCTTCTCAAGCAACTATTATTTGCCA
TTAACTGGAGACAGAGGCAAAATCAGTCAAGGCTTGGAGGATTTAAACGTGTTANTCCA
GTAGGAGAGACATATCCATGAAGGACTAAAGCTAGCGAATGAACAAATTCAGAAAGCA
GGAGGCTTGAAAACCTCCAGTATCATAATTGCTCTGNCAGATTGGCAAGTTTGGACGGTC
T

Sequence 128

GGAGTCACCNCGCGTCCGCCCCGCGTCCGCCCCGCGTCCGGTTAATCTTAGGCCTGAGGT
TTGGGGCCGGTGACAAGGAAGTTAACTCGTCTCCTGCCAGATTCTACCCCTTTCCG
GAGCTGAGCTCCAGCCAAACCTGTGGAGTTTTCTTTGACCATTTTAGGACATGTTACTGC

TABLE 1
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TTCTGAGTTGGCTGCCCCAGCTGCTCAAAACAAGACCTTTCTCCTGGGTTTCCTAGTAGTGA
AAAGGAGCAGCAGAGCAACTGAGGAGGAGGGCGGGTGGGAGGCATGGGACTGGGGCTTGG
GGAGGTCAGGCGAGACCGGGGTGAGAGCTCAGAGAAGCTCCTGTGACTTCCATGCTAAGA
TCTTGCCAGAGAACTCTGGTCAGTCCTCGGGTGTCTGGATGAAGTAAAGGAGTTAGGCAT
TTCTTCCTTTGATTCTCTGGCTTACCT

Sequence 129

CGTCCGGCCCCGCTCCGGGCGTGGGCGTGTTCTCGGCGGGCGTGCCTGGAGGAGGAGCTGG
GTCCTTGTGCGGCTGCAGAGTCAGATGGGGCGGGGATTCGGGGCACCGGGTCTCACCT
TCACGAGAAAGGCCCCACAGCACGTCCCCACTACCGACGACTCACTCTTCGTGGCTTCT
CTCTCCTCCCCAAGAGCAGGGGTGGGCTGTCTCGCGTTCCTGCGGGAGTCAGGAAGC
GTCCTTCTACCTACCAGTCCTCCCCTCTGGTGTCTGGGGACACTTCTGGGGGCCTTTC
AGGTGGTTGGCGCCGGTGCAGGGCCTGAGAGCCTGGG

Sequence 130

GCGTCCGGTGGCATCATGACTTCTGGGGCAGTAGACTGAGCAGCAACACCAGCCACAAGT
CCTACCGGCTCTCACCGTCCTGACTTTCAGGATTAACCTACTACCTCTCGGGAGGCTTCC
ACCCCGTGGGCTTTCACGTGGTCAACATCCTCCTGCACAGTGGCATCTCTGTCCTCATGG
TGGACGTCTTCTCGGTTCTGTTTGCGGCGCTGCAGTACACCAGTAAAGGCCGGAGGCTGC
ACCTCGCCCCCAGGGCGTCCCTGCTGGCCGCGCTGCTGTTTGCTGTCCATCCTGTGCACA
CCGAGTGTGTTGCTGGTGTGTCGGCCGTGCAGACCTNCTGTGTGCCCTGTTCTTCTTGT
TATCTTTCCTTGGCTACTGNAAAGCATTTAGAGAAAAGTAACAAGGAGGGAGCGCATTCTT
CCACCTTCTTGGGTGCTGCTGAGTATCTTCTGGGAGCAGTGGNCATGCTTGTGCAAAAG
AGCAAGGGATCACTTGTGCTGGGTTTAAAATGCCGGAATTTGACAATCTTTGGGTGATAG
GC

Sequence 131

GTCCGCTGGGGGCCCTGGGGCTCTCTGCGTCGAGAGCGCTCGAAGACCCGGGATTCTCGG
CCCGATCGCGGGCGGGGGGAGACCCAGCTCCACCCAGCTCCCGCCGGCTCGGGGAAGG
GGCGGCCCTTTAAGAGCGCGCGGCCCGCCCGCCCTCCGGGCAGGATCCGAATTCCA
GGGAGGCGGGCGGAGACGGCGGCGAGGAGGAGGCCGCGGCGGGACGCATAGAGCTGC
GGCTCGGGCGGCGCTCCTGCGGCGGCCCGGCCCGGCTCGGGCCCCGCTGGGGCAATGC
TCCCCGGG

Sequence 132

TCGCCNCGCGTCCGGGCACACACATGCCAGGCTATTTTAAGAACTACTACAACTATGATA
AAGCTGTGAATATGTAGCCATGAACCAAAACAAAGTCTCTGTCTTGTGGAACATTTGTT
CTGTCAGAGAAGACAGTGTGTTGGCTCACATTGTGGTCAGTGCTGTTGAGCAAAATAGGT
CAGAGTAAGGGGGATGGAGACTGGTGGGAGGAATGCTGCTTTATCCAGGATGGGCAGGGA
GGA CTGATGGTGT CAGCACTGAAGGATGTAAGATCTGCTGCTCTGGGGAGAGGAGCAGC
ATGGAAGGAGTAGAGTGCAGAGGCCATGAGGAAGGATCAGGCTTGA CTCTTTGAGCAAG
GGGGATGGGAAGAGTGACGGNAGAAAGAGGGACAGGCCACATGGCCTGGTGGCCTGTGCT
GAGGCCTTGGGCTTTTCTTCAAGTGAGATGAGATGCCATTGGCCAGTTTGGGCAGTGATT
TNATCAGACTTGTTTCAGCAGGACCATNCTGCTTGGCAATGTGGAGAGCANGCTGAAG

Sequence 133

CGCCNCGCGTCCGAACAGGCCGGGCACCAAGGCGCAGGATTTCTATAATTGGCCTGATGA
ATCCTTTGATGAAATGGACAGTACACTAGCTGTTCAACAGTATATTCAACAGAACATAAG
AGCAGATTGCTCCAATATTGACAAAATTCTTGAACACCTGAAGGCCAAGATGAAGGTGT
GTGGAAGTATGAACATTTAAGGCAGTTCTGCCTTGAGCTAAATGGACTTGCTGTCAAAC
TCAGAGTGAATGCCATCCAGATACTTGCACTCAAATGACAGCAACTGAACAATGGATTTT
TCTTTGTGCAGCTCATAAACTCCAAAAGAGTGTCTGCTATAGACTATACTAGACACAC
ACTTGATGGTGTGCTGATGCTTCTGAATAGCAATAAATATTTTCCCAGCAGGGTTAGCAT
AAAGGAATCATCTGTAGCGAACTAGGATCAGTATGCCGTAGGATTTACAGAATATTTTTC
ACATGCTTATTTTCATCATCGGCAGATATTTGGATGAATATGAAAATGAAAC

Sequence 134

TABLE 1

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GCGTCCGCGAAAGCTGGGAAGCCAGGTCTACCTGCCCCAGACGAATTGGTGTACCAGGTG
CCACAGAGCACACAAGAAGTATCAGGAGCAGGAAGGGATGGGGAATGTGATGTTTTTAA
GAAATCCTTTGAAGATGATGCTGCTTTTTACAAAGCATCGTTTTAAAGCACATGGCCTT
TTTTTTTTAATTATTAGTGGTAGTAATATATAGAATGTATTACATAACTGTCACTGAAGT
GGTTGGGAAAATGTGGTGAAGTACAGGAACTACTAATCTTGCCATCTTGCTTTA
AGGTGTTATGGTGGCACAGTTACTGCTCGCCTGTTAAATTTCAAATGTCCTGTTTGATAC
TACTGGAGAACACTATTTTTAATACAGAAAAAGCTCCCTATAATGCACTTCAGAGAAATT
AA

Sequence 135

TCGACCCACGCGTCCGGGAGTCCCCCTGCCCCCATCAAATGCTTCCTGCAATACTTTG
CACACCAGAGACTGGGCCTCCCCAGATCCAGGGGGACAGGGGTCCCTGGGGGAGTCCCCA
GGGCCAGCCCCTCCAGGCCAGCTGCACACACTTGACACTGATTTGCACAGTCTTGACAA
ATAGGGGGTAAGAGCCCAGTGGCTGGGGTGGGCAATGGGGGTAGCCTCTGGCCTAGGGAG
TCCCCTGGCACTGCCAATGGGCACAGTCCCAGACACACCCCCCTGGCCCTGGACCCCCA
GGCCCCTGCCCCACCAAGCGAAGGCTGCTTCCTGCTGGAGAAGCCCCAGATGTCAGCTCT
GAGGAAGAGGGGGCCAGCCCCCTCGGAGGCGCGGGGATCCCTGGGCCACCCTACTGCTGCC
AACAGTTCTGATGCCAAAGCCACACCCTTCTGGAGCCACCTGCTGCCTGGGCCCCAAAGAG
CCTGTTTTGGACCCAACAGACTGCGGTCCCATGGGGCGGAGGCTGAAAGGAGCCCGTCGC
CTGAAAGCTTGAGCCCCCTTCGAAAGCCTNCGGAAGGGGCCAGGCCTGCTGAGCCCCCCC
AGT

Sequence 136

CGACCCCGCGTCCGTGAGAATTCAGCTTTGGAGTCCCGGGTGAGGGGTTTTAGATAAAC
CATCAATATCACCCACATTCTGTGACTCTTTGCATCACTCGTGTTATTTATTTATTTATT
TATATTCTGCCTTGTTCCAGAAAAGTGTTTAAGGCAACAACGCTTGTTTTTGGTGTTTT
CTTTTGACATTTGAAAATTTAGTACATTGTAAAAATGTAAGTTGTTAAACAGGTAATTTA
AAGAGAAGGAACAATTGTTTTAGTAAGTTTTCTTTTCTTTTCAATGAATTGATTCT
TCAAATTAAGTTCTTGAGAGAAGGAGAGGAAGATACAGCAGACATAGGACTGAGCCAA
GGAAGAGTCTGCCTGAGAGAGACGCTTGGCCTGTGCTTTGCTGCCATCCGTGCGGCCTTG
GCCACA

Sequence 137

TCCGATTTTTAAATCTATTGGCCGTGTTGTCCTACCTGAAGTTCTTCAACTGCCAAAAGC
ACAGCCCTTTTTCTCTGAGCTGGTGGTTCTGGCTAACACTGACAGGGGTGCTTGTTCT
GTGCAGTGGGCATCAAGTACATGGGTGTGTTACGTACGTGCTCGTGCTGGGTGTTGCAG
CTGTCCATGCCTGGCACCTGCTTGGAGACCAGACTTTGTCCAATGTAGGTGCTGATGTCC
AGTGCTGCATGAGGCCGGCCTGTATGGGGCAGATGCGGATGTCACAGGGGGTCTGTGTGT
TCTGTCACTTGCTCGCCCGAGCAGTGGCTTTGCTGGTCATCCCGGTGCTCCTGTACTTAC
TGTTCTTCTACGTCCACTTGATTCTAGTCTTCCGCTCTGGGCCCCACGACCAA

Sequence 138

CGACCNCGCGTCCGGAAGGACCCTCTGAGCTATTTTGCGGCATACGGGAGCAGCAGCTCA
GGCTCCTCGGACGAGGAGGATAACATCGAGCCGGAGGAGACGAGTCGCAGAACCCCGGAT
CCGGCGAAGTCGGCGGGCGGGCTGTAGGAACAAGGCGGAGAGCGGCTCCCGGGACCTGAC
GAGCTGTTTAGGAGCGTGACTCGCCCGGCCTTTCTCTACAATCCGCTCAACAAACAGATA
GACTGGGAGAGGCACGTCGTCAAGGCGCCTGAGGAGCCTCCAAAGGAATTCAAATATGG
AAGTCAAATTATGTACCACCTCCTGAGACCTACACCACTGAGAAGAAGCCTCCGCCTCCA
GAGCTTTGACATGGCAATAAAATGGTCTAACATATATTGAGGACAATGGTGATGATGCTC
CACAGAATGCTAAAGAAAGCTAAGGCTTNTACCA

Sequence 139

CGACCACGCGTCCGGGCTGGCGAGCCCGGCTGAGGAGCCTCTTGGGTGCACTTACCGCC
GCGTCCGCTCCCGTCCCTGGCCCCCTCAGCGGCATGGCGTGCGGGGCGACGCTGAAGCGG
CCCATGGAGTTCGAGGCGGCGCTGCTGAGCCCC

Sequence 140

TABLE 1
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CGTGTCCGGTGAATGGGAGCGGAACCTCACAGGACACAATGAGCCGGGTCACTGATGGCCT
TGCTTTCTAAGAATCTCACAGTGAGCCCTAGAACTCTCTACGTGGTAACACTGTGTGCCT
TTTTCAGAGAAGAGCCTATCTTAGATCTTAGCCTAACGTTGGGTCTATTGTGTTGCTGGA
GAGACCAGCACTGACATTCATCTCAAAGCACATGGTATGTTTGA CTCCTATGTTGA CTCA
ACTACCCATCTTGTACTGGGACACTCGCTTTTTTTTTTTTTTTTGGAGACGGAGTCTTGC
TCTGTACCCGGGCTGGAGTGCA GTGGCACGATCTCGGCTCGCGGCAGCCTCCGCCTCCCG
GGTTCAAGTGATTCTTCTGCCTCAGCCTCCTGAGCATGTGGAGCTCAGGCTGAAGGTGAT
GTGGCCGCCC

Sequence 141

GTCCGATTGATTCTTCTATGATGCGTGTTTCATTATACAATACACATTCTCGGAAAGGCAG
AATTATTTGCTTTTATGATTGTTTTTGTGACCTAAGAAACGGTTCTTCCOCCATTTTCC
TATCCCAGGCCAAAAAATATTCTCTCACGTTTTTCTGTAAGAGCTTTATAAGTTCAGCTT
TTATATTGAGGTCTGTGATTCATCTTGGATTATTATGTGTAGGTTGTAATAAGGAATCT
AGGTCCAGTTTTTCCATGTGGATATTCAGTTATTGTGGGGCCAATTGTTGAAAAGTCTCC
CCAAAGAAGTCTTTCTTATCAGAAAGATAAGATATATTAAGTGTATATCTAAGTCTG
GGTTCTCTTTTCTGTTCTAATGGTTGATATTTTATCCTTATGCCAGAACCACACTGTCA
TGATTGCTGTAGCTTTATAATAGTCTTGAATCAAGTTGCTTTTCAAGTTTTGATTTTTCA
AAATTGCTTTCCGATTCTAAGTCCTTGCATTTCTGCTAAAATTTAGAAGCAGCATGTC
TACCAAAAGGAAAAAAAAAAGCC

Sequence 142

TCCGGCGGAAGAAGGTGCGTCCGCGGCTGATCGCGGAGCTGGCCCGCCGCGTGCGCGCCC
TGCGGGAGCAACTGAACAGGCCGCGCGACTCCCAGCTCTACGCGGTGGACTACGAGACCT
TGACGCGGCCGTTCTCTGGACGCCGCTGCCGGTCCGGGCCTGGGCCGACGTGCGCCGCG
AGAGCCGCCTCTTGACGCTGCTCGGCCGCCTCCCGCTCTTCGGCCTGGGCCGCCTGGTCA
CGCGCAAGTCCTGGCTGTGGCAGCACGACGAGCCGTGCTACTGGCGCCTACGCGGGTGC
GGCCCCGACTACACGGCGCAGGTGCGTGACCCCGTCCGCACCCCGCCCCCTGCAGCCGCCT
GGTCTCCCCGCCTCCCCTCCTCCCTGCAGGTTTTCGTGGCTGAGGCTCCACCTCCTGAC
CTCGGGGGCCGAGAGCTTTGCGAGCTGACCCCGCTTCTTCTGGCTTTGCAGAACTTGGAC
CACGGGAAGGCCTGGGGCATCCTGACCTTCA

Sequence 143

CCGCGTCCGAGATCCTGTAGGTGAAGTTCTCCTGTGCTCCACAGCCACCCAGAGGAATT
CCAAAACCAGCAGTGGAGGACTTGGGGAGGACAGGAGGGAAAACATGGCGAGTTCATCAG
CTCTGTTTCCTTTATTAATAATTTCTGTAATTGGTGGTGGGAAATTGAAGAAATCAAGT
GATTGCATCAGCGCTGGAAAAAGCTGCCAGCACTTGGCAGTGGAAGAGAATATATGCTTT
ATACTGGACTTTTTGAAAAAGAGGCTGAGTTTGGCCAGATTGCCGACCAGCAATGGAAAA
ACTAATTAGGTGCCTTGCCTGTGAGCCAGACGCCAGCAGGGCTGTGGCGCATGGCTCCC
GCCGCCTCTGAAGAGGACACTTTCTAGTGAATTCAGTTCGTGCTACCTTGAGCAGCCTG
TGCTACAGCAGGCACATTTGTGAATCTCCAGCCTGTGCCTGGCGTCNGAACTGTAGCTT
CCGAAAGAC

Sequence 144

CGCGTCCGAGTAAATCTGTTCTGCACTAAATTATATCAAATAAATATAAATAATTATTT
CGTATACCATTCGTTATATACATTTCAAGTGTAAAAATAATGTCAATTTCTTATATTTTA
AGGAGAACTCTAGTTATTTTTATAAATCTAATTGACTTAATTTTGTGGGAATATAAAAAGA
AGTGATTAAAAACCTTTGGTTTAAAGTAGTTAATCCTGAAATCAAGCTCTGTAAATATTG
TGTAGGGATATGGAGAAATCCTCAAAAAGAAAGAGCTAAAGAAAATGGCAGGGATGGCAT
CTTGGGAGTATAACTGAAAGTAGGAAGATGTGGATAGAAGAGTCTTATTTTTAATCACAG
GGCATATGTGCTATTTGAATTATTTGACAAAAGTATAAAAATATGGAATTATGCATTGT
GTGTGTGTGTGGTTTCATCTGTTTAAGAAATATGTGATGGAGACTGTCCTATCATCAGGA
AATTATTCCAGT

Sequence 145

GTCGACCNCGCGTCCGCGGAGACACCGACCGCGGGCGGCAGCAGCAGCAGCAGCAGCAGCGAGA

TABLE 1
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GGCAGAGGCGGGCGGGCGGGGAGGACAGCACGGCCGAGGCTGCCAGAGGCGCCTCCTC
CACACCCCGCGCCGAGCAGCACCGGCGACAGATTTTTTAAAAAATGGATTTGGCCAACC
ATGGACTTATTCTACTGCAACAGTTAAACGCTCAGCGAGAGTTTGGTTTCCTGTGTGACT
GCACGGTTGCAATCGGCGATGTATACTTCAAGGCACACAAATCAGTTCTTGCTTCATTCT
CCAATTACTTTAA

Sequence 146

CCACGCGTCCGATCCTCCCCAAGGCAGAGGTGTGCGTGCGGAACCATGTCCAGCCCTACA
TCCCATCCATCCTGGAGGCCCTGATGGTCCCCACCAGCCAGGGCTTCACTGAGGTGCGAG
ATGTCTTCTTCAAGGAGGTACGGACATGAACCTGAACGTCATCAACGAGGGCGGCATTG
ACAAGCTGGGCGAGTACATGGAGAAGCTGTCCCGGCTGGCGTACCACCCCTGAAGATGC
AGAGCTGCTATGAGAAGATGGAGTCGCTGCGACTGGACGGGCTGCAGCAGCGATTTGATG
TGTCCAGCACGTCCGTGTTCAAGCAGCGAGCCAGATCCACATGCGGGAGCAAATGGACA
ATGCCGTGTATACGTTGAGACCCCTCCTGCACCAGGAGCTGGGGAAGGGGCCACCAAGG
AGGAGCTGTGCAAGTCCATCCAGCGGGTCTGGAGCGGGTGCTGAAGAAA

Sequence 147

NACCACGCGTCCGCCNCGCGTCCGCTTGACCCCGGTGAAGAGCGTGCGTGTGCTGAGGCC
GGAGCCGCGAGACGGCTGTGGGGCCCTCGCACCCCGCTGGGTGCCGCGCCTGCCCCGGC
CCCCGCCNCGNCCNCGCCCCGNCCNNGCTGCGGAGGGCTTGGACGCCAAGGAGGANCA
TGCCCTGGCGCTGGNCGGCACAGGCGCCTTCCCGNTGGACGTGGAGTAC

Sequence 148

TCCCAAGAGCTGCANGNNNCAGCCGCGACAGCAAGAACCAGGAGCCGGCAGACCGCGG
CGGCGGCGGCGNCGGAGGCAGGAGCAGCCTGGGCGGGACGCAGGGNCTCCGCGGGCGCAG
GAAGGCGAGCAAGAGATATNCTCTGAGAGCCAAGCAAAAGAACATTAANGGAAAGGGAAG
GAGGAAANGAAGGCTGGATACCGGNGCAGTGAAAAAAGGCACTTCCAAGAGNTGGGGGCA
CTCACTACGCCACNAGACTCTGACCGGGTGGCCCAATCAAGCCAATGAAGAAACCTATA
ACCGGNNTTAACCTNTNATTGGCCTGCCTTCTNNNTNNGGGGGTGGGGGCCCAAGCCNC
TTAACCCCCCAACCTTCNNNTTCAAACCTATCCCAACCTTATTNAAAANGAAGGGGANC
CTNAAGGATGGGGNTTCCCCCAAGGCNAAAAAGGAAAAAAGGGGGCCCCNNGGGAAG
CCTTCNTTCTTGGGGAAAAACAAGGCAAAAAAATTGGAAGCCTGAAAACCGGCTTCAA
AAAAAAGGGG

Sequence 149

GGCCGAAAGGGGGGCGAGGTGGTGGGGCCGCGCAAGCGGAGATGGAATGGGGCCCGGGCTC
AGACTGGTCACGGGGGGAGGCTGCCGGCGTGACCGCGGGAAGGCGGGGCTGGGGCTCGG
CGGGAGGCCACCCACAGCCGCCCGGGAGGAGCGCGCCAGCAGCTGCTGGACGCGGT
GGAGCAGCGGCAGCGCAGCTCCTGGACACCATCGCAGCCTGCGAGGAGATGTTACGGCA
GCTGGGCCCGCGCGCCCGGAGCCGGCTGGTGGCGGGAACGTCTCANCCAAACCTGGAGC
G

Sequence 150

CACGCGTCCGGCCTGCTGTTNACCTGCGGGACCCAGGAACCTGGACTTGTTTCTCAAAG
TGGTTCATGGAGATGTACCCCCCTACGACCTGGTGCGGATGAGCTCGATGCAGCTGGCCC
CCCAGGAGCTGGCCCGCTGGCGGGACCAGGAGGAGAAAAAGGGGCCTGAATATCATTGAGC
AGCAACAGAAGGAGCCGTGCAGACTTCCAGCCTNCAAAATGACCCACAAGGGCGAAGTGG
AGATTCAGCGGGACATGGACCAGACACTGACCCTGGAGGATCTGGTGGGACCGCAGATGT
TCATGGACTGCAGCCACAGGCCCTGCCATCGCATCAGAGGACACCACGGGGCAAGCAT
GACCACCACTTCTTAGACCCCAACTGCCACATCTGCAAGGACTGG

Sequence 151

TTTTCTTAGAATCTTCGAGAAAAAGATGAAGGTATTATTCTCAGTTTCGAGATCAGGA
CTCCTCACCACCAGGCGGGGGCTTTAAGGTAGACACTACAGGGAATCTGATCTCAGGGTG
ATCCTCTCCCTTCACTTGCAAAAAGAGAGGAGCAGGTGGGCCACTGCTCTCTGAGATGT
TAACACCCCTCACACTCCACGGGCATGCTTTGTCACTTCTGCACACCGGTGTAGCTGCAGC
TCTGTGTGAATTCAGATCTCAAGAGAAATGTAATCAAAAGTATGAGTTTCTTTCTTCT

TABLE 1
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TGGGTGCCACAGTAGGAATGAAATGATGGGGACTTTTGGGAAGCCCCTGGACTTGTGGCCC
CTGTAGAAGAGCAGCTTGGGCAGGGTGTGATGGCCATCTCTGTCTCTAGGGGCCCTGTGG
A

Sequence 152

TGGCGAGAGCGCTGGTGCCGAGTGAAAGATAACAAGCTCATTTTCCACAAGGACAGGACC
GACCTGAAGACCCATATTGTGTCTATTCCGCTCCGTGGCTGCGAGGTGATCCCGGGTTTG
GATTGTAACATCCTCTGACGTTCCGGCTGCTGCGCAACGGCCAGGAGGTTGCAGTATTG
GAGGCATCTTCTTCTGAAGACATGGGCAGGTGGATTGGGGATTTTACTCGCAGAGACGGG
GATCGTCCACAGACCCGGAGGCTCTGCACTATGACTACATTGATGTGGAAGATGTCTGCA
ANGTGTCAATCAGACAGGCCAAACAGACCTTTCTGTTTTATGAACAGGGCGTGTATAT
CTGCTAACCCATATCTAGGGGGCACCTTCAACGGGTTATTGCCACCCAGCGGGACGGCA
CTTTAATATGACGATGTTTCCGTNCCATAAACCGGNTTGNTTAAAGGGTAAAA

Sequence 153

GTTCCGACCCACGGGCGTCCGCGGGACCGCCGTGGGNNNNACATACTATGCGNACAGGCGC
GTTGNACACAAANGGCCCATTCCTGTAGCCTCACACTTGACTACACATGGGGGANTCACT
CGGATTCGGNTCTCCACGTGGNNGNTCTTTGTTCTGTACTCTACGTAGCTTTGGCTTTTG
TTTTCTCGTCGCAACAGGGCATGAGACTTCGTGACCTTNGGGGTCTGTATAGTCTTTGA
CTTACTACGTGTAGGTCTCAATACAAAGTGGGANATANTCATATCCGTCCGCGAAAAGTA
ATTCTTGGA AAAAATTTACCCTTGTCTCCCGCNTTATGAAACGTGAACTAAGTAACTCACT
TTGCCCTGGGGCGCCTCTNNTTAACANTGTTCTTTTGNCGAAATCATCATAACCTTCAA
CTGAAAACAATGTGGTCAACAACTGACTATGGAGGTCTTAGGCTCNGTCTCTAAGATCT
TTAACCTTGTTTATCGGCGCGTGC GGCGTNGTCCGAACGAAGAGACTATAACCCGCACTA
TAACNAAAACCTTTTTTAATCCCACCACCTCGTGAGGGANGGGCCCTAAGACTGAAACT
GTAGTAAGTCCTATTGATTTGCGTAGGAGGANTTAGGAAA

Sequence 154

NCGCGTCCGATAGTCTACCAGCCTTACCTGGTTGATTACACTTGTAAGAAAGATTAAA
AGCAGGCCAGTGACTCTGGTCTGCTTGAACATGTGAATGTAGTGGTTTGAGCAATCTGGA
GTTTGCCCTAGTGTCAAATCCAGACTGTCCATAGTGTCCAAAACCTGAGGCAGACACTA
ATGTTAATCCCCAGCACCCCGTGATTGGAAACAAACCTAAATACGTATTGGGAACCTAAT
AGCAATTTTAAAGCATTCTGATAGATTTTTGTAGGGATGGGGTCATGCCATGTGGCCAG
GCTGGTCTGAAAACCTGGCCCTCAAGTGATCTCAAGCTTTGGCCTTCTAAAGTGTGGGA
TTACAAGGTGTGAGGCATTGCACCTGGCTTAGCCGTCTTGATTTGACATTGTAATGAAAA
AGTGTGAGTCTTATTCTACCAGGGGCCCTTTTTTGTCTCTTGAAAATNGAATAACCANG
GGAAGGGGGAA

Sequence 155

CCNCGCGTCCGTCCATCACAGCCTCCGAAGGTGCTGGGATTACACGGCATAAGCCACTGT
GCCAGCCTGTTTTTAATAATGATATTAAGTGGGTTTGGTTCATGTGTTATTAATCAGTG
TTAATAATCGTACTTTTTTTTTTTTTTAAAAGAAACCATGGGTATTCTAAATCAGGAG
TCCAATAAAAGAAAGTTCTCGGCTGTGCGTGGTGGCTAACACCTTGTAGTCCCGGCACT
TTGGGG

Sequence 156

CGCGTCCGAAAGGAGTCGCGCCGCGCCGCGCCCGCCCTCCCTCCGGTGGGCCCGGGAGGT
AGAGAAAGTCAGTGCCACAGCCCGACCGCGCTGCTGAGCCCTGGGCACGCGGAACGGG
AGGGAGTCTGAGGGTTGGGGACCGTCTGTGAGGGAGGGGAACAGCCGCTCGAGCCTGGGG
CGGGCGGACCGGACTGGGGCCGGGGTAGGCTCTGGAAAGGGCCCGGGAGAGAGGTGGCGT
TGGTCAGAACCTGAGAAACAGCCGAGAGGTTTTCCACCGAGGCCCCGCGCTTGAGGGATCT
GAAGAGGTTCTAGAAAGAGGGTGTCCCTCTTTGCGGGGTCTCACCAGAAGAGGTTCTT
GGGGGTGCGCCTTCTGAGGAGGCTGCGGCTAACAGGGCCAGAACTGCCATTGGATGTCC
AGAATCCCCTGTAGTTGATAATGTTGGGAATAAAGCTCTGCACTTTCTTTTGGCATTCA
AGTTGTTAAAAACAAATAGGA

Sequence 157

TABLE 1
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CGCGTCCGGGTGTCNAGGCCATGGGGCAGCCCTGGGCGGCTGGGAAGCACGGACGGGGCG
CCCGCGCAGCTGCCTCTCGTGCTCACCGCGCTGTGGGCGCGGCGGTGGGCCTGGAGCTG
GCTTACGTGCTGGTGCTCGGTCCCGGGCCGCCGCGCTGGGACCCCTGGCCCGGCCTTG
CAAGCTGGCGCTGGCCGCTTCCAGCTGCTCAACCTGCTGGGCAACGTGGGGCTCTTCCT
GCGCTCGGATCCCAGCATCCGTGGCGTGATGCTGGCCGCGCGGTCTGGGCCAGGGCTG
GGCTTACTGCTACCAATGCCAAAGCCAGGTGCCGCCACGCAGCGGACACTGCTCTGCCTG
CCGCGTCTGCATCCTGCGTCGGGACCACCACTGCCGCCTGCTGGGCCGNTGCGTGGGCTT
NGGCAACTACCGGCCCTTC

Sequence 158

CGACCACGCGTCCGGGGACTCAGGCATGCACCACCACGCCCAGCTAATTTTTGTATTTT
AGTAGAGACAGGGTTTCTCCATGTTGGCCAGGCTGGTCTCGAACTCCTGACATTCGGTGA
TCCACCCGCTCGGCCTTCCAAAGTGCTGGGATTACAGGTGTGAGCCACTGTGCCCAGCC
CCTTCCTGTTGAGTAAAGGAAGAAGTTCAGGGTAAGACACTGTACAGTGCCCAGCATCT
GGAGAGCCCGCAGCATTACCCCTGCCTTAGGAGGTAGTCGTCTCCTCATCACTACAAGGT
ATTGAAGCCTGAGGGCCCCCTGGGCAGGACGATAGAGTGAGATTGCCCTGGGGACTCAGGA
AAGGAAACATGCCGTATTTNTAGGGAAGGAGCTGCTGCTGCCTCTCAGTGACTCTGGTTC
CAGGAGGGAAGAGCCGAGAGCTAGGGTTCCTTTTCATAGGGAGAAACCCAGCAGGGTTTG
GGGTGTTCT

Sequence 159

ACCACGCGTCCGAAAGGAGTCGCGCCGCCGCCGCCGCCCTCCCTCCGGTGGGCCCCGGG
AGGTAGAGAAAGTCAGTGCCACAGCCCCGACCGCGCTGCTCTGAGCCCTGGGCACGCGGAA
CGGGAGGGAGTCTGAGGGTTGGGGACGTCTGTGAGGGAGGGGAACAGCCCCGCTCGAGCCT
GGGGCGGCGGACCGGACTGGGGCCGGGGTAGGCTCTGGAAGGGCCCCGGGAGAGAGGTGG
CGTTGGTCAGAACCTGAGAAACAGCCGAGAGGTTTTCCACCCGAGGCCCGCGCTTGAGGG
ATCTGAAAGAGGTTTCTAGAAAAAGGGGTGTTTCTCTTTTCGGGGGGTCCCTCACCAA
GAAGAAGGTTCTTTGGGGGGTCCGCTTNTTGAGGGAGGCTTGCGGNTTAACAGGGCCAA
AAAANTTGCCATGGGATGTCCAAGAATCCCCTGTAATTTGATTAATGGTGGGGAAATAA
AGCTTTGCAACTTTTTTTTGCNATTTAATTTGGTTAAAAACA

Sequence 160

TCCGCTCCCCTGTTTTCTTCTTTTTCTTTTTGCTTGTATGCACAACGGTAGGACTTACT
TCGTAAGAAACAAAATGCCAGTATTTTCTTAAGCCATGATGTGAAACCAATGACCCTGTG
ACCACATGGCACAGAACTAAATTTTGGTCCCATGGCTGAAACTTGAGGGTGACTAAAA
GTAATGCCTGTGAAACATGATATCTATCTGGGATGGCCATTTGATCTCTAAAAGGAATTT
TGTNCACTCCACAGAACTCCTATCTATAGTAAATTTGATTTTTTC

Sequence 161

CGTCCGGAAAAATATTAACAACACTCATTTTAAGATTCAAATTAATAATTCTGCATATA
TGACATTCCTTACATAAGCGAACACTAAACAAAAATGGCTAGAAATGTCTTTTTCTTTCT
TTTCTCTCTTTGTTGTTTAAGGTATTAAGCACCGAATTATTACATGAGACTGGCAGATAG
CTATTAATCCTCTTACAGATTTGAGAAAGTTGATTCTCAAATATTTATGCACCTTCTCCT
TCATTGTTTTCTTAAATCTGTCCTCTTAAAAAGCTTCTTAAGAGCTCAGTTAATGCTTT
TGACTTAACTAGGAGAAAAAGGCATGATAATACAGGCAAGATGGCATTGTTAGCAATTCT
GGTAGGTGGTTTTGGAATGAATCCTAAGAGGCAAGGGGATCTTAAGGACAAGGAAGAGAA
GAGAGAGGGGGNGGGATCCCTTTGATCTCTTTCTCTGGNAATCTTAAATGCNTAATTTTA
CTAAAACATGTTCTCAATTCATTCATAT

Sequence 162

CCCCGCGTCCGGATTAATGAGTGTATGCCTAGCTCTTTCTCCAGTTTACTTTTAGACCAT
ATTGTTGTTTGTGTTTGAATATCATTCTTAGGCTATGTTGAGAGTAGAGTGGCTTCCCAT
TAGGAGAACTAATTTAGGGCATGTCTTTTGTGTAATCCCGTCAGCATATTTAACAAATTC
CCAATTCTAGATAATTTCTTTTATTTCTCTAGTACCCTTTGCCAGGGGCTCTACACATC
AAAGGTGTTTCATGAAGTATTTGTCAAAGGAAAGAACAGTAATGACACCTAACACATAATG
AGTGATTAGTATGTTCCAGGCATTGCGTGAGCTATTTACTGTGAGTGATTTAATGTTATC

TABLE 1
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TTCCAGCAGACCTCTGAGGTAGGGTACTAGTATGATCCCCATTTCGTACATGAGGAAAC
TGACACTAAGGGACATAAAATAAGTTTTTGAAGTCACAAAGTGAATAAAAGGAAGACCAG
GGTTTTAATTGGAAGCCATA

Sequence 163

TAGACTTTTGCAGTGTTAAACACAGCTTCCTTAACTCTTAGAACTGGAAGTTGTAGAGCT
CTCCTTTTGGTGCCTTTCCAGCCTTTATACACACTATTGTAGCTTTCTTAGGTTTGATAG
GTAGCGTTTCAAGTAGTTTAGCTGAGACAGNGAATGTATTAGGTTCAACATGACCTTGTG
TTTTATTTGTGTTTGCCAACAGGATGCCTATTTGTTTGAGAAAAAGATGTACTAGTGTG
ATTCTAACTATCTCCTTTTTTAGGATTCTAAAGAAGTTAATCATCATCCTTTTGTTTAT
TTTACCACCATTTAGTGCCTTAAATCCTATCAAGAAAGCAGTGTTACTGCTCAATGCCCA
ATAAGACACGCGGATATTGCTATTGCTTGCTTTTGAGTTAACAGGCCNACTTTTTATAC
TTAAACCTCA

Sequence 164

GCCCCGAAGTCCCACTGTCCCTGCCGAGGCGCCGGCGCCGTCCCCTGTGCCCTTGACCAC
GCCAGCCTCCGCCGAGGAGGCGATACCCCTCCCCGCGTCTCCGACAGCGAGCGGTCCGC
GTCCAGCGTGGAGGGGCCCGGAGGGGCTCTGTACGCGCGCGTGGCCCGACGCGAGGCCCG
GCCGGCCCGGGCCCGGGGCGAGATTGGGGGCTGTGCTGTGCGCATCGCCCGAGCGCAG
GAAACCGCCGCCACCTGACCCCGCCACCAAGCCTAAGGTGTCTGGATCCACGGCAAGCA
CAGCGCCGCTGCAGCTGGCCGTGCGCCCTCACCACCGCCGCCAGGCTCCGAGGCCGCGCC
CAGCCCCAGCAAGAGGAAACGGACGCCAGCGAACAATCGGCGCATACGGTCGAACACN
GGAAGCCCCCGGACCCGGACCCAACGCCGGGGCCCCCGG

Sequence 165

AGTCCGCCCCACGCGTCCGGTGAGTTTAGCGCTGCTGTCCGGATGGGTTGGTAGCAGACA
GGGTGGAGTAGGGTTAAGCACACTGGTCACCTTAGGATTGGTTTCTGGTGCTGGAGAAT
GGTTAGGACACAGGCCTTGAAGGTTTTTTGAGTGTGAAATATTACTCAGCGTTTTCTGC
AGACCTCGCGGGCAATGCCGCTTCTAATTTATCCAGGCCTTCTTCTGTAGGGAGGGCCT
GTTAAGAGTTGAGCAGCCCGATTTCTGAACCCCTCTAAAAAGCTGTGGCTGATTGGTGGC
TTTTTTTTTCTTGGAGAGGGGGGTGTCAAAGATTTCTTTAAATCGTTAGTGATGTGGT
CTCGCTTA

Sequence 166

ACGCGTCCNAAAATGTGTGGTACATGGAATATTTTTATTATGCTTATTTTCGTATTGCCA
GGTAGATGCCAGCCTGACATTCAAAATTTATTTATCAGCCCCTAAATGTTAATATTTCC
CAAATATTTAAATCAGTAGAAGACATTTTTACTATTAAGAATAAAAAAGTTATAATATAA
AATGGATTAAATGCCAGATTATATGCTAAACAAGTCCTTTAAATTTTTAACTTAATATTT
TTAACAGATTTTTTTTTGAGATGCAGTTTTACTCTTGTTGCCAGGCTGGAGTGCAATG
GCACAATCTTGGCTCACTGCAACCACCACCTCCCGGGTTCATGCGATTCTCCTGC

Sequence 167

CCGTCCGCGAGGTTAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTA
CTAAAAATACAAAAAAATTAGCCAGACATGGTGGCAGCCTCCTGTAGTCCCAGCTACTC
GGGAGGCTGAGGCAGGAGAAGGGCATGAACCTGGCAGGCGGAGCTTGCAGTGAGCCCAAG
ATGGCGTCACTGCACTCCAGCCTGAGGGACAGAGCAAGACTCTGTCTCAAAAAAAAAAAGA
AAAAAAGTGGCACAGATCAATTATAAATCACTGCTTCAAGGCCAGTGCTCTCACTTTGT
ACATTAATAATCTCAGGCCCAAATAAGATAAGTGATATGTCAACGTATGTTCACTTTGGT
CTTTACATGGCAGCTATAGTATACCGGAATATTATAAGCTCAGATCGTCATAGCTACATA
ACTCCTTTAGTTGGGAAGANACGCCGTAAATGCCCATCAAGANTAGCAAGCTTGCAATT
GACT

Sequence 168

CGCGTCCNGGTAACCTGAATAAGGATTATGTGCCCCACCCTTACTCTCATTCTGCTTCC
TCTTGGGCTCAAACAGGGTATGAGTATGAAGATTTTGCCTTAGTTCCTGAACTGAACCT
GCTTGCTATCCCTTTCCTCCCCACCACTACCTTATTCTTCTCTGCTCCAAATTGCCAC
TTTGTITTTGAGGCTTCCTTCCCTACCTTATTATTCTGAAGGAAGTAGAGATCTTGCTTCT

TABLE 1

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GAAACCCCTCCTAAGAACTGCCAGGGACAAGATAAATTACAAACAATTCATGGGAGTT
TACTACCTAAGTTGCTTCTAGGGCATATGTATACCATACTAGTAGTCTAGATTTCTGG

Sequence 169

AGGGAGTCGCCCCGCGTCCGGACAGGATCTATGGATGGAAGAAGATGAAAACAAACACA
CAGCCATAAAGGTAATTGTTTCTGGCCAACATCTTTCTACTGATGCTTTGTTTTGATTGT
ATGTTGCTGTTTATATTTTCTCAAACCTTGAGGCTCTATTTTATGAAATGTTGAATATAAA
TACATTGTATTTAACTTGAAAAATTCCTGGAAATATACCTGATAATTACCACCTGAGGAA
TCGNTTTATTTTATGAAAGTAACAGCGTGATGAATACTGTAATTACAAAAGAAAATTAGT
ACTCACTGACTTATACCCTTGTTTTTTTTTTTTTTTGGTTTGGTTTTTTTTTGGTTTTGN
TTTAGGNGACA

Sequence 170

GGAGTCGNCCCACGCGTCCGGCTGGCCAGCAGACCCTGCAGCAGTCATTGGTGGTTCTGT
CTTCCCTAACCCTTATGNGCTGGAGGACAGAGGAGCCACCTCTTCTCACTGGTTGATAC
TCTGTTCCCTAAGACCTCAGGTTACCCAGTGTAGCCTGCTGTGACCCTTCTGCTTCATTTT
CTGCCAAGTGATACAGAACCTTCGTTCTGCTGCTTTGGGGACAGGTGATCCTAGCCCCAG
CTTAGGGCCAGTGCTCTGTGCCACTCTGGAGAAATAGGGAAAAGATAGGGGTGGCTCAGT
ACAGCAGCCCTGTGAAAGTCAAGGCCAGAGCTTTCTTTTTTAATTTTTTTATTATTATT
ATTATTATTT

Sequence 171

TTTAGGGAGCCGACCCACGCGTCCGCTTGGCAAACCTCCGGGGACTGTCAGAGGAGGAGA
GGAGCGAGAAGGCTATGCTTCGCTCCCGCATTGAAGAGCAGTCCCAGCTCATCTGCATCC
TGAAGCGGAGGTCAGATGAGGCCCTGGAGCGCTGCCAGATCCTAGAGCTGCTCAATGCAG
AGCTGGAGGAGAAGATGATGCAGGAGGCTGAGAAGCTCAAGGCCCAGGGTGAGTACAGTC
GGAACTAGAGGAACGCTTTATGACCCTAGCAGCCAACACGAGTTGATGCTCCGCTTCA
AGGATGAATACAAGAGTGAGAACATCAAGCTGAGGGAGGAGAATGAGAAGCTGAGGCTGG
AGAATAGCAGCCTCT

Sequence 172

CCACGCGTCCGCTTAGCCGCTGCCAGAGTTCCATATGTTCTGGAACCCTTGACTCCTAGA
GTTCAGAACCAGCCAACCTTGAGTTTTTCAAGAACTTCTGACACTCAGAG
TTGCAGAACCCTCGTCCCTGCAGATTCTTGAAATCAGAATATGGTGGTTGNAAAGAA
TCTTGTGGCTGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTCTGGGAGGCCGAGGCG
GGCAGATCGCCTGAGGTGAGGAGTTTGAGACCAGCCTGGCCAACATGGCGAAATCCCGTC
TCTACTGAAGATAACAAAAATTAGCCGGTCATGGTGGCGCCCGTGCTGTAATCCCAGCT
CGGCAGGGCCGAGGCAGGAGAATCGCTTGAACCCGGGAGGCAAGAGGTTTGCAAGTGAGC
CNAAGATCGAGCCACTGCACTCCACCTTGGGTGACCAGAGTCTTAAAAAAAAAAAAAA
AAGG

Sequence 173

CGTNCGGTGAATATTCAGTAAGCTAATTAATTTGTAAGTAAGATTTCTTATTAATAA
AACTATTAATAAAGANGAAGCCCGTTNAAATAATNATTAGAGNNGGAAAAAGAAGATG
ACTATCNAATTACAGCACTTTTTTTCAGCTATACATAAAGGCCTTTTCANT

Sequence 174

CGTCCGGTGACCCATTAAGTATATTTCTGACCCANAGTTTGAAAGAGATTATAGGTGTA
GCTTTGCTAGTTTGTAATTGATATAGAACAGTGACTATCAGGGAAGNTGAAGAACGGCNA
ATTGAATGTAAATCATGTCTGGATGGTGAAGATTCTAAGAATGCANCTAGGGAAGGGCT
GCAAAAAGAAGGTGGCAGACTAATGTAGAATGGTGCAACCAGATGAAGACATGGGTGGCT
TTAGGAATTCCAAAGTGGCCGTGAAGGCCAGGCACGGTGGCCCACGCCTGTAATNCTAGC
ACTTTGGGAGGCCAAGGTGGGTGGATTGCTGAGCTCGGGAGTTCGAGACCAGCCTGACCA
ACCAGGTGAAACACCATCCCTACAAAACAT

Sequence 175

GGCGGCGGCGGGCGGGCGGGCGGGACCCAGCGGGCCAGGTGGGGACGGCGCGTNGCGGG
TGCGGGAGATGCCGTGCGGGACTGGGGCCACNTTGAGCCGCCGNCTCGTCCCCGCCTTC

TABLE 1
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TGTGGGAAGGATGTGCGCGCGGATGGCCGGTTCGCACAACAGCGGCCCTCGGGGGCCCTA
CGGCCCCCTGGCTCTGCCTCCTGGTGGCCCTCGCCCTGGACGTCGTGAGAGTGGACTGTGG
CCAGGCTCCCCTGGACCCTGTC

Sequence 176

GAGCTGGCTGGTGTGTTGAGCTGTGGCAGAAGCACCTGGGGCTCCAGGGAAGCANGCTGGG
AACTGCAGGACCTTGCTCAGCCAGGAGCACTTCCCCCTCCTTGAGGCAGGAATACTGAGG
TGCCTCCCCACAGATGGAGAANGTGGAGAGGAGGATGGGCCTCAGGAGCATCTCAAGCCC
CAGTAGCAGGANAAAGAAAGAAAGAGATGCCTGGTTTTACAGACTGGTTCCTGTGGCTG
GGATGACTGCATCCTTTTTTTTTTTTTTTGAGACGGAGTTTTGCCTTTGTCGCCCAGG
CTGGAGTGCAATGGGGTGATCTCGGATCACCGGAACCTCCGCCTCCNGGATTCAAGCAAT
TNTCCCGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCACGCACCTCCACCGTNCGGCT
AATTTTGT

Sequence 177

CCTGTNAGGGGACACAAAGAAAAATTGAATAAACTGTATGATTTAAAGATTATCGGGA
GAGTTACCTCCCGATATAAAAGGAAGGATTTACAGAATGTGACCTAAGGTCTGGCGTAAA
TGTGCACCGGAACCGAGAAGGCCCGGATTGTCATGGACGATGAGATACACCGGAATATCA
TGGACATATTCTTTAAAGCGCCCTTTATCTTCAAATGCGGCACGGAAACCGGAGGCTTTG
AAGAACTCAAGGAAGCGCGGCACGATACCGCCCGCAATAAACACGCCGCCAAATGTCCCG
AGATTGAGCGCCAGATTGCCGCCAAAACGGCCCATATGACGCAAAACAGCGACAATGCG
CGGCGGCAATCGGTGCAAGCTGTCAGCCAGCGCCGCGTTGCGTAATATCTT

Sequence 178

CACGCGTCCGACCGGAAATGCTGACCTGACCTTTGACCAAGTACGNGCGGTGGGGGGGGG
GGACAAGTGGGGTGGTGGTATTAAGTGGCTCCGGTGGGTCTTCAAGCCCCAGGAACCCTC
CAAGGGGGAAACAAATGGAGGGCCCTAACGCAAGAAGCTTCAATCGGTCCCTTGACTGG
GCTTCTTTGGTGGGTGGTGGGTATGGCCTGGGCTGGCCTTTNCCTNAATCTTTCCTT
CCCTNCCTGGGGGCAATCTGGCTGGGTGGCCAAAGTGGCTTGCCCCGGCAACAACCTTGGC
TGGCTGGCTTACGGTCAANGGGTGGCCCTGGCTTGCCCCAAGAACAAGGTGGCCTTGC
TTTGCCCCCGGAAGGGCCCTNGTAATTGCCCGGCCCGGGGCCAAAAAGCCAAGCCACC
TTCAAGGGTGGTTTCCCAAGCATTTTAATTGCCCGGCCCAAGCAACCCTTAATTGCCCAA
CCCTTGTTCTTCCCGGCCCAAAAGAACCCTCCNAACCCCCCAACCAAGCTTATTGGA
ATTTTCCCAAATGGGGGCCCTTGGCCCTTACAAAACGGGGGTTTACCCCTTGGGG
AGGGGAATTAACCCCTGGGGAAGGAAACCGGTTTTGGACCANGGGGAAGGTAAGGCTTT
AAANCCTTGGGGTNGGGGCCCAAAAGGGCTTCCCTAAATTGTTAACCCCTTGGCNTT
TT

Sequence 179

CGTCCGGAAGAACTGTTTCATCTACTCACTGTAGTGCCCTCCTTGAAATGTGTGTTTGTCA
TTCAACTAACAATATTTGGGGATCCCTGTAGTAAACACTGTATGAATTTACACAGTCTG
GCCATCAAGAAAGATCACGGAGTATATTCTAGATGGGGAGGCTACTAAGTGAATAGGAAT
CACCACGCTGGGCTGTTTATTAGGTACAGTAATAAACATAAGTACTGGTTGCAAAAANAAA
ANANAAAAANAAAAA

Sequence 180

CCNCCGCGTCCGAAAAGACAAGACAGCATACTGTATTTTCTCTTAAATTCATGTTA
CAATTAATGATTGTTNTCTGAGAATAAGTTAGCTTCAGCTTTCTAATCGATGTGTTCCC
ACATCTACAAATTGATATGAAAAATTATTTGAAATGCACACTGCAAAATGGTGAGAATA
TGAAAGTTACCTGGGAATTAATCAGAACTGTCTCCATATGACTATTTCCAAGTCACAAT
CATAACTTTCTTAATAGCAATGGTTATATATGTGGCCAGATAGTATTCAGTTTCACAGTA
ATGTCTCGGTACATAAAGATAGCANAGCATAGACATAGTACAACAATTTATTATTTCTG
CTGATTGCCAAATGTGCATAAACTATAAAGATATATTTTCCAGCCCAGGTGACAGAGAC
CCTGTCTCCNNTTNAANCTTCATGNTAAAGGTGCGGCCGCTAGACTAG

Sequence 181

CGCGTCCGCTAATCAACTTTTAAAAATAATGTTTTACGGCCGGGCGCGGTGGCTCACGCC

TABLE 1
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TGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGGAGATCGAGA
CCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCCGGC
GTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGATTTTTTATTTTTTGAAC
TTTTTACAGAGAAGGGGGGTCTCCCTATGTTGCCAGGTTGGTCTCAAACGTTTGGGCTC
AAGTGATCCTTCTACCAAGAGTGCTGGGGATTATAGGCATGAGCTGCTGTGACCGGCC
AAAATCAAATTTCAAACCTAAAAAATTCTCAGATAATTAATGAACCTACGTGAATTAAT
CTACAAATTCAGTTTGAAAAACACTAAAGATAAACAAGTCAATGTGGGAAACTTAA
AAGTANGTTGGTATTTAGGTTATTGGTTAAAATGGGGGACCGACTGGCATACACAGTCCT
AAATATTTAAGTCTTAAG

Sequence 182

CCCTATCTTNCGGTACTGGTGGGCCAAATTCCTGGGACCAGGTCAAGGTGGGCTGCCTCA
GTAAGAAGGAAGGACTGGAGAGTGCCCATTTAGAGGAGCAGGCTGGTGGGGGCCAGCCA
GAAAGTAGTTCCCTTTGGGGGGAAGATGTTGGACCTTTATTATTTGTGGTAACCAGCCGA
GGCTGGTTGTCAGGACAGCAGGTGAGCCACTTTAGGGAAGAAAGTGCAGGGGTGGGTGGA
TGCCAGATTACCAAGGCCAGCCACCCTGATGGGGTAGGGTCTGGTTATCTGTGTTCAAG
AAGCAAATCCCACCCAGCCCGAGCACTAGCTCTCTATGTATGTATTTTCCCTGTACAAT
GTTTTATAAAAGAGATCATTAAATTTAAAAAANAANA

Sequence 183

TCGTCCATTTACCTCACTTATGGGGTAAAAGGTCACTTCAAGTAAGGTTAAAGGTTTTCC
CTGGCAAAGGACCTAACCAGAGCCCCNAAGGGGGGAAAAAAGGAGGTACCTTTGGGGA
GGTACCATGGCCCNTTTTGGTCTGGCCCNTTGGGCNTCTTCAACAACAAAGGAATATTT
ACCAGGCCCTTTGGAGGCCTTTGGATAATTTCTTAAGAAATTTGGTTACCAGGAAGAAT
TTAGGCTTCNTNGGNAAAAAGGAAAAATTAGGACCTAGGAAAGGGAATTAAGGGGGNAA
GGGGAAATCAATTAAGCNTTAATGGAAGGGGGTTTTACTTCTGGCAATCAAGAACCGGC
TTTTTCNTAAGTTTCNTAATGGAACCTTAAACCGGTNCCTAATANGGGCTNGTAAANGGG
GTTCTCNTGGCGGTGGNAAACCACTTTCTTTTCTTNGGGCCCTTCCCTTTCTGNNCC
CCCAATTTNCCCTTCTTTNAAACCTTCAAAGTTGCCCTTGGAGGGTTTTTAATTAATT
CCCCCTTGGTGGCCANTTCCCTTGGGGGGCCAATTGGGTTTCAATTTCCANCAATTANTG
GNAAAAACCAAANTCCAAGGGGAAGGGACCCCTTNGGGCTTAANTTTTTCTTTTAAAT
CTTCCTGGGAATTTTNGGATNGGGGGAAAAAATAAATTAATAATTCCTTTTGGGGCG
CCCTTGGCCAAGTNGGGGGGAAAAATAATTTNGGNTTTTNGGGGGGGGGNTTGGGGA
ATANCCTTACCAAGGAACCCCTTCTTGGATNCCTTTTGGGGGGTCTTTTCAAAAAAT

Sequence 184

GCGTCCGGTTGTAGTTTCCCTTCCCATTCTCTTGGTGGCCCTGGAAGCTTCTAGGCACAA
GTGTGCCACCCTGATTATTCNACCCTCCATCCAACCTTTCTCTCTCTGTGGGTGTCTG
CACCACAAGCTGCCTACCCTCCAGGTGCCTCAATGGTCCGGCCACCAGTTGTGCCTCGGC
GCCCCCGGCCACATCAGCAAGTGTGAGGCAGGCCTCCACCCAGGTGCCACGCACGGTG
CCTCATACCCAGAGAGTAGCCAACATTGGTACTCAGACCACAGGACCCAGTGGGGTAGGA
TGCTGTACACCAGGCCGCGCTCCTGCCGTGCAAAATGTTCTCAAGCAGCACATAAGCA
CCTATCGGGTCCAGGAGCCGGCTTGTGCACATNCCAGGACAGGAGCCCCTGACCGCGTCC
ATGCTGGCTGCGGCGCCCTGCATGAGCAAAAGCAGATGATTGGGGAGCGTCTTACCCC
CTTATCCATGATGTCCACA

Sequence 185

GTCGCCCCGCGTCCGGGCATTTGTATTTTCAACAATTGTTCTCAAATTTAGAAAAGAGAC
ATCGCAAGATGGTGAAATAGGAAGCCCTGGGCCCTCCTTCCCTCCACAAACACACTGATT
TGACAACAGTTCATGGACAGATTCCCTTTATAAGAAACCAAGAACTGTAAAGAGGCTCT
TATACCCAGGTGAGTGCAAAATCATCCACATCAAAGATAGCTGGGAAGTTCAAGACACC
TTCTTTCCGTAATTTCTAACTGGCACAGTACTATATGATTGAGATGAATCTCCCCACAT
CCAAGCTTCTGCTGGGGAGGAGAGGGGAGGGTATACCATTATGTCCAATGTTCCAACCTC
CTTAGGAGCTACCCAGGTAGGAGGTGGGTCCAGCTCTGTGAGGCTTGTCTTAAGAGCAC
TGATTGAGGGTCTGGTATTCTTAAGTGGCCAGGACCATAAGAGCAGTGGATGGTGCTG

TABLE 1

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GGGNTNNGNNGTGGGTTACCCATAACCCCTGGTTTTTGG

Sequence 186

TCCGAAGCAGTGAAAATAGTGTTTGA CTCCATTGACAACCTAGAGGCGGCTCCTCATGAT
ATCGGCTACGTCAAACAGGCCATGTTCCACTATTTCCAGGTGCCAGATCGGCTAGGGATA
CTCACTCACCTGTATAGGGACTTTGATAAATGCACGTTTGCTGGGTTTTGCCGGAAAATT
GCAGAATGTGCTCANCAGGGAGACCCCTTTCCCGCTATATCTTCAGGAAGGCTGGGGAG
ATGCTGGGCAGACACATCGTAGCAGTGTTGCCGAGATTGACCCGGTCTTGTTCCAGGGC
AAGATTGGA CTCCCCATCCTGTGCGTGGGCTCTGTGTGGGAAGAGCTGGGAGCTGCTGAA
GGAAGGGTTTTCTTCTGGCGCTGACCCAGGGCAGAGAGATCCAGGCTCAAACCTTCTTCT
CCAGCTTCACCCTGATGAAGCTGAGGCACTCCTCCGCTCTGGGTGGGGCCAGGCCTAAGG
GGCCAG

Sequence 187

CGTCCGCGTCTGCTCCCTGCTCGGGGTGCTAGTGTCGCTCTGCTCGGCCGCGGGCTC
CCGGAGGACTGCAGGCAGGATGACCGCAAAAACACGGGTGATTGGTGAATGGAAGTTGCT
ATGGGCCTCTAAGGGCCATCCCAAGCCCAACCAACGTTAAACGGTCCACAATCCACCAA
GGAAGTCAAGCTTTTGACACAAACTGCTGAAAAGCTGGGAGGGTTTCTTCTGAAAGAAAG
TTTCTTTTTTCAACCCTGGGGGACACTGGTGCCCTTTCCACAAGCCAGGGAATTGGGTTT
ATGAAGCAAGCTTGGCTCTAAGGGGGGTGACCTCAAGATATTTGCTGGGGGGTTGTGAGG
TTTGGTGGTTCTTGGGAAGTGTGTCTCAAGCTTTGGGGGCCCTGGAAGTGTGCTTGAAGT
GCCCTCAGGCCTGTGCCCTTCTGGGGCCGGGGGTCTTGTGGGTGNATNCGCAAGCANGGA
AGCCTGGGGGCCATTGGTCCATTNAAGAAGGCACCCCGGGGCCAAACCTTGCTTGGCTAT
ANTATTCCAAGCCTGCTTCAACCCNTGGGCAGGCTT

Sequence 188

TCGACCNCGCGTCCGGCTTCGACGCCTTCCCTAACATCGAGAAGGTGTCCAAGATCACGT
CTCCCGTGCTCATCATCCACGGCAGCGAGGACGAGGTGATCGACTTCTCGCAGGGCTGG
CGCTCTACGAGCGCTGCCCCAAGGCGGTGGAGCCGCTGTGGGTGGAGGGCGCCGGGCACA
ACGACATCGAGCTCTACAGCCAGTACCTGGAGCGCCTGCGTCGCTTCATCTCCAGGAGC
TGCCAGCCAGCGCGCTAGCGGCGGCCCAACCGCGGACCTCAGCAATAAGGCGGGC
CCCGGACCTCACCCCGCGCCGGCCCCACCCAGGGGCTGCATGTGGACCCCCCGGGCGGC
CCAGGGGACCCCGCCCCGACCCAGGGGCTGTGGACGATGTACAGGCAACAGAGCTACCGC
ACTCCTTTCTTTTGAAGCAAGAAGAAAATACGTGAAAACGGGAAATTAAAGATTTAA
AATTTTTTNNNNNTNNANAAAAANNAAGTGCGGC

Sequence 189

CGCGTCCGAAGCCTTTTGTCTCAGAGAATTTATTGTCTGACAGCAGAGGCCGATGGTGG
GATCGACTGGCCCTTAATTTACACCAGCACTTGAAGCCGCCTGGAACCCGACTATCAAGT
GCATCACAGAGGGGCTGGCGGATCCCGGAAGTCAGAACGGGACACCGNCTTTCACTGTAT
CAGCGAGCCGTGCGCCTGCGAGAGTCTCCGAGCTGTAAAAAGTTCAAGCACCTCTCCAG
CAGCTCCCAGAAATGGGCTGTGCAAGATGTGAAACACGTGACCATCACAGGCAGGCTGTG
CCCACAGCGTGCGGATGTGCAAGTCTGTGTTTGTGATGGAGGCCCGGGGAGGCCCGCTG
ACCCACACAGGTCCTGTGCTCTGTGGAGGAGCTGGCACTGGCCCATTACAGACGCAAGC
GGTTTTGACCAGGGGATTCATGGCGAAAGGGTCCACCTTCAGCACCTTGTATGGCCTTC
TTNCTGTGGGGACATCATCTTCATNGGATGGGATTCCCGGATGTCTTCAGAAACGCCTGT
CANGCATTNCCCCTGG

Sequence 190

CNACACATGCGGAATCATAGGCCTGCAAAGCTCCTGCTATTCACTATAACTCTGCCATGC
CTTAGGCACCTTCTAACCCTAGAATTCTGAGTGAAGGACAACAATAACTAATACTTTTGT
TCAGGTATTACAAAGAAGTTAAGAGTTCATAAGGCACCTAAGTAAAGTCACATTGGTTAA
GAGTACATGTCTCCAGATACTCTTACATTTGCAAAGNAATTGCATTTCTGNATCTATGGT
CTGTAATAAAATTGAAGAGTTGNGAGAATAAAAGCATGTTGTCTTTGATAAATTGTTTT
TACAAAACAGGCACAAGAGAGGCTTGAAGGGTCCTTGCTATCTTTTAACCTATTTTATAA
TCTTTGCTGCATAAGAAACAAATATGCTTATTTACATTCTATACTTAAACATATTATCAA

TABLE 1
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ACTTTTATTCTGAAGATAATACACATGAAGGCTTTAACTTTAATCTTCAATATATTTTT
TAATCTCCCTGATGAATTAGGGAAATAAATATTGGG

Sequence 191

TCTCCCCCTTCACCCCTCCTTTTTTTTTTTTTTTTTGTTTTTCTTAAAAGCATTAGCTGG
GTGCAGTGACACATGCTTGTAATCCCAGCTATTGAGGAGGCTGAGGTAGGAGGATTGCTT
GAGTCCAGGAATTTGAGGCCAGCCTGGGGAACATAGCAAGAGCCTATCTTAAAAAAAAAA
AAAAAAGCATTTC AATTATTTTAAATTTNTAATTACAAAACAATTCTTTCCTGTCTTAG
TTTAGTTTACTTTTTACTCACAAGTTCTTGAAAGTAGTTATTACTCAATAATTGAATG
CATGAGTGTCAACTGCAAAATCTATGCATTATGTAGNGATTTGAATCAATTAGTCTTTNT
TGATACTCCAAAATTACCCTTTTTCGAGNGTCTTTATCANAAATTTGATAAATCGGAACT
T

Sequence 192

TCCGCCCCGTGAGGGGCAGCTGTGGTGTGGTGTGATGATGCTGGGATAGGCACTCAGATG
GTTGAGTCTGAGTTTGGCTCTGATATTATCAACTGCATGGGCAGCTGTGGTGTGGTGT
GATGATGCTGGGATAGGCACTCAGATGGTTGAGTCTGAGTTTGGCTCTGATATTATATCA
ACTGCATGGGCAGCTGTGGTGTGGTGTGATGATGCTGGGATAGGCACTCAGATGGTTGAG
TCTGAGTTTGGCTCTGATATTATCAACTGCATGGGCAGCTGTGGTGTGGTGTGATGAT
GCTGGGATAGGCACTCAGATGGTTGAGTCTGAGTTTGGCTCTGATATTATATCAACCGCA
TCATTTTGGGGAAGACACAATTTCTCAGAATTTTATTTAAGTTGTAAAAATAA

Sequence 193

ACACATTGCGGCACCGGGCTGGGCCTGGCCATCGTCAAGCATGTACTGCTGCGCCACCGC
GCGCGCTTGAAATCAGCATGTGTGCTGGGCCATGGCAGTACGTTACCTGCCATTTTCC
GCCAGCTCAGGTGACGCGCACACGGCTGGTCCGGAATGATGAATAACCTGAAGTGACGAC
GACCCAATGTGGGAGCTGCTGATACTTTGCTGTCTCCGCCAGCAGTGGGCACTAGGCAA
GCGCCCCATCAGCCGCTACATTGGCCGACTTGCGCCTGCCTTTCAGGCCCTCTCGTCACC
CCTTATTGAACACACGGAACCTGCAAAACCCATCATGGACCCTTCCCCTGGTATTACCC
TCGCTACACTCTTCGCGGATTTGCGCATGATTCTTTTGC ACTGATCCTGGTACTGCTCA
ACGGTTTCTTCGTTGCGGCGGAATTTGCCATGGTCAAACCTGCGCTCCACCGGGTTCGAGG
CCATTGCCACACCAACGGGCTGGCGCGGGCAGATCCTGCGCACCGTACACAGCCAGCTC
GACGCCTACCTGTCGGGCTGGCAGCTGGGGTATTACCCTCGCCTTCTGGGTTTGGGTTG

Sequence 194

TGAAATCTCCTAATACACTGNGTTTTTATTGTTATGTATTCTATGTTTTAAAGCTCCTCA
AGGTATTGTTATTCTTTTGTATAATCAGTGTTTGTGGAGCTGTCTGTAAATTTTCCTC
TTTTTTGCTCTTTATTTTTCTTTCAACTCAGACCTTCCAAAATGGGATTATTTTTCTTT
TTTCTTTAGAGACATTTGCTTGATAACAGAATTTAATTTGGCGGCTATTTATTTTTTTC
AGCACACTGCAGGTATTAACCTACTTGGCTTCATTGTTGGTTTTGAAAAATCAGCTGTTT
TAATGTTGCTCTTTGAATATAATCTGCCTTTTTCTGTACTTGCTTGNCTTTAAGTTTTTT
GTT

Sequence 195

CGCTCCCTGGTTTCTTGTCTCATGAANAAGAAAAAATCCTAACTGTTCTTGATGATCTTT
AAGGCTCANAATGATCTGGACAGAGGTATTTACCTTGAAGCTCATAAAGCATAGGCCTTT
CTCACTTGACAGAGTATCTTTCTGAAGCTGGACTAAATTGGTTAAGGCCACTGTACTTTTC
CACTTTGTCTTCTTTCTGTACACACCCTATCCTTTCAGGCTGTGTTGGGATGGACAAA
AGCAGTTCTGGAGTCCTAAGGAGAAGATGAGTGGGATATGTTTCTGTGACCTGCAGTCAT
TTTAAAGTTTAGCTGTTGCTAGCTGACTCCATGTAAGAATACCTTCCAGGAATTTGATGG
CTGTGCACTCTGGCAGTGCAACTGGCATGGT

Sequence 196

CNCGCGTCCGGCCCTGATTGATGAAGCACAGTCAGTAAATCATCTCTTCATTCCCCAGTT
CTTAAGCCAACATCAGCAACACTGAGAGAACATTAGATTAAAGGCAGGTATAGAAGAGAG
ACTTAGGGTAACAAGTTAGTGGGTGCCTGAAGGCATGTGGGAAGAGATGTGGTAAAGGTG

TABLE 1
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TGCACACTATTCTTACGTGACTTAAAATGTCAAGGGGCTTGGTGTGGTGGCTCATGACT
GTAAACTAGAGCACTTTGGAAGGCCAAAGCTGGAGGATAGCTTGAGGTGAGAAGTTCAA
GGCCAACTTGGGCAATATGGCAAGACTGTGTCTCTACCAAAAAAAAAAAAAAAAAAAAA

Sequence 197

CCGTCCGGAGAGGCTGTTNTTGATNGATACTCCAGAATAGACACGGGCCCTTGAAAAGCT
TGTACCTTTGGGGAAAAAGTAGACCAGGAAAAATCTCAAGCCAGAGAAGGACTATGAAGCTT
CTTTTCCAGTTACACATGGAAATAAGAGGTCTTGATGAGAAACCTAAATCAACCCCTT
TNTNTTAAAGCAGGTTTTGGAGTCTAAATTTATACTAATTGCATTGTGGAGCAGGTCTAG
CCAAGAAATTAACATGACAATCAGTCTCTAATCTGTCTGTCTATCTACTTACTTACCTAC
CAGTCAGGCCAAAGAGATTCCCAAGTAGGTTAAAAAAGTAAAGTCTGATAACAAATA
ATTAGTAAGAATGAATGAATAAATAAATAGCACAAAGGAACACTCTACCACAAGGAGGAG
TACTCATCATCAAATGAGAGAATACCCTAAGAAAGTGAAGATAATGCCAGCAATCTGAA
AGATATTTTACCNAACGTGTTTAAATGNNTAGGTTATTAAAAAAAAAAAAA

Sequence 198

CTAAGCTGTTATTTTCCCTAAAAATGCTTCCCTTGCAATTTATACTTATTAAGAATAGATA
ATAGCTAACATCTATCCACTGCCTTTGATTCATGAGGCCCTCACGAATTGCCTCATTAGG
TCTCCGACAGTATGGTACAACACTCTTTATATTTTACAGATGAAGAACTGAGGCTGGA
CTGNTACCTTTTTGCTACACATCCTAATG

Sequence 199

AACCTGTTTTGTTAGATGTGAATCTAGGAAATACAATATATTTTAAATGTAAAAGNACTC
TTGCTTTACTTGTAACCTGATTTTCGTTTTTTTCCCTCAGGCCATCAAGCCCTGTCGTC
CTATGACCAACAATGCTGGCAGACTTTTCCACTACCGGATCACAGTCTCCCCGCCTACGA
ACTTTTAACTGACAGGCCAACTGTTATAGAATACGATGATCACGAAGTATATCTTTGAA
GGATTTTCTATGTTTGCACATGCCCCCTGACCAATATTCCTACTGTGTAAAGTAATTAGA
TTCAACATAGACTACACCGATTCAAT

Sequence 200

AATGCAAGAACATCTGGATNAAATGGCTTTCTAGATGAGAATGGTTGCATTTTTTAATGG
CTATTCTGGTAGAAAGGACAACATGTGATATTCATCGACCCTCTTTCTCAGACCCTCTTT
ATAACAGCTAGTATGGAAAAATCTGTCTTTCTATAAATATTTTCCCTGGGGAATGGNTT
CCCATTAATGTGTNGGATGCTTTGNTGTTTCTCTCTTGACAGCGTGTATGTTGTCTATCT
GCACTTAAGAAGTGGAATGGAATTGGGAATCCTGGTTTCTTGCTCTGGCTGGAGGTCCCA
AGTCCGCATTGTGATTTTGGGAAGTCACCGTTGTTCTTCTAGATCTAATTTAACTCATCT
GTAAANAANNNGGNTNGAATTCGACAATTTTCATGGGTTTCATTAGATGCCAATATTTT
ATGACTCATGATCCAGCNAGACTACACCTATTTATAAGGCTGGTTTTGCTTGTTTTTAC
TAAGAGCAACAATNACTACATATTTTCAAGGTTACTCAATCATCAAAAAAATTATAAAATC
CATAAACACTTTGGATTTGAAACATTGCAACTTTG

Sequence 201

CGTCCGAAAAGCAGTCTTTCTTGCTCAAAGTATTAANGGTGAACAATTGAATAGAGTACT
GTGGTCCGGAGACTGATTTGAGACTGCAGAGCTGATGCTGGGTAGAGGGTCTGGACTTGT
ATTCATGTTCTGTCTCAGGGCAGCCCCTGGAGCAGGAGATGGCAGAGGCATTTACAGCTG
CAGAAAACAGGGAGGAATGGAATCTGAGGTAGCCCTGGCCTCAAAATTCAGGCCTGGCTG
TATCATTTACAGAGATTTTCTGGAGGGAAAAAGTCTCATTTCTGAGGAAGGCAAGGNGG
GCTAATCATTATTAATTTTTTTAACTTTTTG

Sequence 202

GCGTCCGGTTGAAGAGGGCAGGGAATAGGGGTGGGTGAGCGTGAACAGAGTCAGGCTGAT
TGCTGCAGGGTCCCTTGCAATAGTTGAGGTGAGAAGAGACCCGAGTAGGCCAGTGAGCCT
GGAGGAGAGGCTCTCTGTGTGTTAATTGGTTTCCAGCTTTTTTCTCTATTTCATGTAGG
TTATACACGTTTCTCTGTGAATTTTTATTTAAATGATTTTTTGTGTTACTGGATCTAC
AAACAGCCCAACTCCAAGGAATCTGGCATCTCTCAGTGGAGCATACAGGTGACTTCATAA
TCTAACCGCATTAGTAACTGCCAAATCGGAAGTAATTTCTCTGTGTTTAAAGGCAGTG
AAACAAATTTTCAGAGCAGGTTTCTTCAACTGAACAAAATATTTTGGACCTTAAAGGTGG

TABLE 1
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TATGGCTCTCCTGATCAGGGAGGGACAGTGAAAGGTTTGAGCTCTGACACTGNCCAGCTC
TCTGGATACAACCAAGTGACTTTTTTTTG

Sequence 203

CGCGTCCGAGTATATAGAAAAACCATTAATTTAGACTCTGTGAGATTAGGTTGCATGAAG
AAGGTTTTCTGAATATTTGAAGAGTGGATAAAATAAATGTCCCCAAAGCAATAAAATCAT
AATCCTTTAAATATAGGAAAAATAACTAATGGGAACTAGGCTTAATACTCGGGATGAAA
TAATCTGTACAACAACTCCCATGACACATGTTTACCTATGTAGCAAACCTGCACATGTA
CCCCTGAACCTTAAATAAAATTTAAAGTAATAATAAAAAAAAAAAAAAAAAAAAAA

Sequence 204

CGCGTCCGCTGGGAGGCTGTGGGGTCTGCCACCCAGCAGATCTGTGTCACGGGAGTGGCG
CTGTCACTCGTTGAGGTGGTGGCCTGGTTCCTTTGGCCTTAGGGAAGGACAACTTCAAC
TCTGAGCCTTGATTGAGTGACCTTGCCAAAGTTACCTAGCTTTTCTGAGCCTCACTTTTT
TGGCNATTAGATGAACCAGAGGTTTATTTCACTCAGAATCCTGTTACGATGCTGGTATT
TGGACCAGCCTGCGGGTTTATCCTGGGCTCTTTCTG

Sequence 205

CGCGTCCGAAAAAGGATGAGAAGAGAGGTGCATTCCAGAAGACAAAAGGTGTGTAGTATC
AGGATAAGGGGCTTTAAATATCAGATCCAGAGAACTGCACATGTAGAAATGGGCTTGG
CCTGGGTCAGGGCATTGAGATTGGTTACATAATCTTTCAAGGATTGGTGAATGAGTTGG
AGTATGTGTAGAAACCTACAAAGATGACAGTTTAACTCTCATGTCATAATTTTAGACAAA
TAATGTATTTTAAACTGGGTGCAGTTCCTAAAGCTGTTCTAAAAGTCAATGCAACTGAA
TTTGGAATGTAAGCATAGGACAAACAGATGGGAAATAAGTCATGACCTCTGTGGGATAAA
GTGAGAGTTATCAAAGAATGTCAGTGTTTATAACAAGGAACAAGCTTGTTTTGGAGAATT
ACTAGATATTATGAAAAATTTTTCTTTCTACATTTGGGTAACTATAGCTGAACTATA
GCAGATCATATTGACTTGGCAAAAAA

Sequence 206

CCNCGCGTCCGTTATGTACTTTTGAGACTTCCATTAGAAATATTGGCAAGTCCCTGCT
TCGTGGCCATAGATTTAAAGGCCTATCAATTTTAAATGTTTCGGTCATTGAGAGCTAAA
ACATGTAACATATCACAGTGTTATTCACCAGAAATAAAAAATCAAGAGTCTGCTCAGAGT
AGGTTAATATGAGTTCCTTTCTTCAGTCCAGCTGATGGTTTTTAGTAAGATGAACTGCCA
AGGAGACAATGAGCACTGACTTCTCGATGCATGACTTCATCTTGTTAGAAGGTGGGTTGC
CGGGCCGCGGTGGCTCACGCCCGTAATCCCAGCACTTTGGGAGGCCGAGGCGGCCGGATC
ACCGAGGTNGGGGGGATCGAGACCATTCTGGCTACACGGTGACACCCCGTCTCTACTAAA
TATACAAAAAATTGCCCGCGGTGGTGG

Sequence 207

CCNCGCGTCCGATGAATAGTTAGCCCATGATAAAGGAATAAAAGGATGAAGAATATTTGA
AGAGAAATAAATCTTCCTCACTCCTCAGGTTCCCTTCCATGTGCAGGAGCCTCAACCTAC
AACTAGCAACCTTATCTCCTGACTCATTCTCTAGAGGAGGAGTAAATTAGTCAACTG
ATATGCTCTGGAAGAAAAACCCA

Sequence 208

CGTCCGGTCTTTCTCCCCCTAAATAATGCATTACAAAGTGGAATGCAAATTTCTGTG
CAAGCTCTAAGTAGCAGGTGGTATTTCTTAATATATTGTTTTGACCTTTGGGGAAATT
GGTATTACGAGCTGACTTTGAAAAATTAATAAGCATCAAGGTCCTACATTTTAAATAAA
ACAATCGATATCTTAATTTTTAAATCAGACTAGATTACGATACCAGGAAAAGACATACA
TATTTTGCTTTTATGTGTTAAAGTTTTGTAATTCAGGGAGGACAAGAAAAGGGATATGGT
GCAGCTGAACCTTTCTAATTCATAAGACAGGAAAAAAAAAAAAAAAAAAAAAN

Sequence 209

CGTCCGGGAAAAACAAGGGTTTCCGCCAACAGGCTGAGAGCAAAGGAGGACGCAGGAAAA
CTATTTTAAAAATTGACCCAAGAGTTCAAAAGGCATATGGAAGCATTTAATGGGGGTGGG
AGGTATCCTTGTAATAAGAATACCATGCATGTATTCCCACTGCTCTTGGTGGTCTGCA
AAGTGATTTTATATGTTTATGTCAACACCAGCACAATGAGGTAAGTAGGACTGTATA

TABLE 1

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CCTCAGAGGCATTTGGTGATTTGTCAGAGTGGAGTGTAGTGTGTTGGTGCCAGATTTGA
ATAGGATCATTTGAGTCTGATATCATCATGTTGCCACCGCCTACTCAGCCTCTACACCC
GATGAGGCCAATCTGCAGCTCACTACAGTCAATAGAGAACAGGCAATTAACCCCTTAAGTT
ATATTTTAGAAAGATTTCTGTCTAAAATAGATAAACTTGAAAGTATAGCTCTTCAAATA
ACGTATTCCTGTGTTGGCAAATATTTTCCAACTCACAATCAACACATAGGTGTATTTCT
TAGACTACTAGAAGTGGGGACTTACCCCAA

Sequence 210

CGCCNCGCGTCCGGGAAAAACAAGGGTTTCCGCCAACAGGCTGAGAGCAAAGGAGGACGC
AGGAAAATATTTTAAAAATTGACCCAAGAGTTCAAAAGGCATATGGAAGCATTTAATGG
GGGTGGGAGGTATCCTTGTAATAAGAATACCATGCATGTATCCACACTGCTCTTGGTG
GTCTGCAAAGTGATTTTATATGTATTTTATGTCAACACCAGCACAATGAGGTAAGTAGGA
CTGTATACCTCAGAGGCATTTGGTGATTTGTCAGAGTGGAGTGTAGTGTGTTGGTGCCCA
GATTTGAATAGGATCATTTGAGTCTGATATCATCATGTTGCCACCGCCTACTCAGCCTC
TACACCCGATGAGGCCAATCTGCAGCTCACTACAGTCAATAGAGAACAGGCAATTAACCC
TTAAGTTATATTTTAGAAAGATTTCTGTCTAAAATAGATAAACTTGAAAGTATAGCTCTT
CAAATAACGTATTCCTGTGTTGGCAAATATTTTCCAACTCACAATCAACACATANGTG
TATTTTCTTAGACTACTAGAAGTGGGGAC

Sequence 211

NCGCGTCCGGTTTCNTTGGGATAGATTTTACCTATGAATTCCTCCTTAGAATTCTGAAAT
TGCTCAGATTTACCCAAATGACAGCCAGTTTCTCATTTACATTTGGGGGCTGTAGAATC
TTCCAACATTGAGAACCTGTTTTAATCAAAGGATGCTTTGTGGAATCCTGAATGAGGAAC
AGCATGTTGCAGGAAGAAGAGAAGGATCCTGATGCCCTAATGGGACTGATTTCTTTTGG
GGGGCAGGAAGATATATTCGTTGGGTGCTTATAAAAGGTTAATCCAAAGATTGTGTA
TGGTTAAAGGACTGAAAGTCACACTTAGCCTCATACTTCACTTAGATGAAAAACAAAGC
CTCCTCTCCATTACCTTGTAAGATCTATTCTTGTGCTTGTGCTGAGTGGACCTGGAA
TAATGGATAGCCCTCACTGAGTACCTAGAAGGGGACTAGGGGTGGGTGATGAAAGGGGGT
TCACACCGAAGATCTAAGTGCTAGCTTGGGTA

Sequence 212

CACGCCCCGTGGCCTTGCTAGAGATCCATATAATGCAGTCATGCTGTTTCTTNTCCATA
GTATGTGGGGCATGAGGAGGAGACAGGGAGAGGGTGGCTTCATTGNGCAAANGNGGAATG
GCTGTGCTTTGGGGCCAAGGAGATGCTGTCTGCTGTAGCTGCTCTGTGAAAGGTGAGGC
CTGCCCTNTGAGGCTCCCTTTATCCTCCTAAATTCTGGGGCATCTACATGACGCTTTCT
AGTCCACCTTTGCCTNCGCAGATCATGGCTACTAACCTGACCTTTGTCTGTACTTGAGCA
CCCTTCGCGATTTAACTTNCATGTANCGTCCGACTTCTAATATGGATTTGAATTTNTTGA
CTGTTACTGCTCANAACAATCACCTTTTTTGTAGCAGNGAGCTGGNAGGATAATTGCCGA
CAAATGACATTNGGANCCGTTTTNAACCACAGGGGGCATGGGG

Sequence 213

CGATCATTTTATTAGAGTNATGTATTTAAGAACTGATAAATCATGGGCTTACCTACACAA
TGTCTAGACACATGAGCAATGAACAAATAGCAAGGTCTGTGATATCTCATATGGCAATAC
TAGGACTGAGATTATTTTTGTTACAATTAATAATTGTCAGTAAAAATCCACAGAGATCA
TTTAGAATGGGAAAAAAGTCTGATATATTTGTTTCAGATTATAATCATTAAATAGGGTAC
CTGACAGTTTTCAAAGTTGTTTAAATGTTTTTAGGTCTTTAACCTTCCTAATCCTACAAG
GTGGTTACAATCCACATATTATCCTTGTGTCAGGGGTCTCCAGCACCTGCCTTAGGGTC
AGTGATTTGCTAGAAGTACTTACAGAACTCAG

Sequence 214

ATCTGACAGCCTGGAACNGCACCCACACCCCCAGGTGAGAATCTGATGTTCTGGAGCATC
ACACACAACCACAGGTGAGCATCGGAGAGTCTGGAGCAGCACCCACAACCCAAGGTGAGC
ATCTGACAACCTGGAGCAGCACCCACACCCCCAGGTGAGCATCTGACCTCCCGGAGCAGG
ACCCATACCTCCAGGCGAGCATCTGAACCCATGGAGCAGCACCCACGCCCCAGGCGAGC
ATNTGACCGAACAGAGCAGCACCCCCCTCTA

Sequence 215

TABLE 1

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TCCGGGAAAGACTCTGAGAAAGGACTCCTGACCTGGCTCTTCCAGAATGAGGATGGATTT
TCCATATGAAGGAGCCGGGGGAGGACCTTCTGGGTAGAGCGTGAAAAGAACACAGTATG
TGTGGAGAGCGGGAAATTGTGTTGAACTGTCTAGAAAACAGAGCCACAGGAATGCGTGTT
GAGGGCTTGGGCTGTACAGTGGAGAGTGCCCTCCCTGGCCAGGGAGTTGGACATTCATCC
CACCACAAGACCCCATGAAGAGTTCTCAACAGCTCTGTGTCCTCATCAAACCTGTGTTT
GCAGAACAGTGGAGGAAGAGAGCTGAAGGAGGGGAGAGGCCCTGCACCTGCCAGGCCCTG
GCCTAGACTACAAGGGTGAGCACTGAGCCATGCTCTCGGGGAACCTTCACTGGAGTTGAG
GGCAGTGAGAATGTTTAAAAAAAAAAAAAAAAA

Sequence 216

ACGCGTCCGATGCACACTTGTCTTTTACCACANGGGTGGGGCGTGGGANGGAGGTTTAGT
TTGGATAGCCACGTAAACGCCTTTCCCTGTGGCCTGCGATGTTCCACACCGTTTATGTGT
GAACTGGCTGCACCCGCGCCTCCCGGACGGGGCTGCCAGGGAGGAGGGCCCCGGGAGACCC
CATCCAGACCCCGGCCCGCACGCTGCAGAGGTCTGCTCTCAGACATGTGGTGGGCTCCGT
GTCACGGGTAAAGGGGTGCGGGTCTAGACGGCAACAGAGTGTCTCTCTCTCCCGCTCCCT
GGTGTGCCACCTCCCTGTACAGTGTCTTCTGTTCAAGCTGCTGCAGGGGACGGGGCATT
TTCCTCCAGACTCTATTTTCTGCAAGGAAGAGCTGCTGTCTTTTCTTACTGAAGCCC
CTGATTCTGTGTCTGATGTTGCTGACCGCCGTGCTTGTCTTCTGCCCCGTGTGCAACTC
CAATCCCAAGCACACGTGCTCACTTCCAAG

Sequence 217

GCGTCCGGGGAATGGCTGTNAGTNAAGTTAGAGGTAAAAAATTTTCATGTTAAGATTTTG
GAACTGGATTTTATTTAAATAATGATGCGAAGCCATTGAAAGGTTTTTGGTGTGACAGG
ATAAATTTAAATATGAACACACCAACGCATACTTCTTTTAAAGAAAGAACCTGATTAAAT
TTGGGAATTTTAAATAAAAAACAGGAAGCATATCGTACTCTAATATAATAATTCAAGGT
TTTTATTTTCTAGAAGATCAAGGTCATGTTAATAAAGGGAATATAGTTTTCTTATCTGT
GTTAAGACACTGATGACTTGCAAAGAAAAGTAACACTTTTGTGATATCCTTAGGTAATTC
AAGAGGAAACGCTTGAGCAATTACTGATGTTGTAAACTGGGATCAGAAGACATA

Sequence 218

NCCCCGCGTCCGCCAGTTGCAAAGGAGATGTTGTAGGATGTTAGGTCTCAGCACAAAGGA
ACCCAAACCTTCAGGGGCTCTCCTCTACATTATGCTCCCATTTTTCTCCCAAAATATCGA
TCTCCACCCACCCTAGACATAGAAGTGGAGAATAAGTTCCAGTTTCATCCCTTTCAGAT
CTTAGGGGGACCCATCAAATCCCAGCCACTGGGTGAAAATCAGCAGCTTCTTTATAGGA
CCTGAGTTGCCTTCTAGAGGATCCTAGAGGAAAAAAAAAATCTTATCCTTCAAATACT
GCTGTCTTCCAAATACGTAAGGACGCCACGGTGAATCATAGTGGACACCCTGCATTGGT
TGGGTTATTATTTATCCTAGAAGCTTGGGTTCTTGGAGCCCTAGCTTATTTAAGCAACAA
AGTCCCTCACAGCCACAGGTGAGGAAGTGAAGTAACAAAGAGATCATTTGGACCTAAAA
TCAAAACACCTG

Sequence 219

CCCGAAAGGAGGTTTGTGGAAGTGGAGAGATCCAGGAGGTAACACCAAAAAGCTGCATT
TAGCAATGCCTGCCTAGCCCTCCTGTACAGCTCATGTTATTTTGTGCTTAGGCCATCT
TACACCAAAACCATTCCTATCTCCATGCTTTGTTATGCTGTTGCCTCCTTTTAGAAGGG
CCACGCTCCACCGCTCTGCTGTGTTGATACTACCGACCCTTCTTTAGTTCCTGTTCAAT
TCCCAAGCCTTCTGCCAAGCCTTCTTGGACATTCCCATCCCATGCTGACTATTCCTTAAG
CTAAAAACCTTAGAGTTAATATGATACACTTGGCTACCTCATTGTTTCATATCAGTCAT
TCCTGTCTCTAGCTATAATCGGCTCAGCCAAGGAAGATATATTTATATGGACAATGTCTT
TGTGCCTTGGCTGTAAACAGTGTTGAATAATTAATCTCACTTGATGAGGTCTTACTTAAT
GATAGCCTCC

Sequence 220

CTCGTCCGGGCTGGATCCGTCTGCNCCACTGCAAGGGCAAGATGCAGCTGGTGGCTGACC
TGCTGCTGCTGTGAGCGAGGCGCGGCCCTGCTCTTCGAGGGCCCCGCTCCTCTGGTG
CCGGCGCCGAGTCCCTCGAGCAGTGCCGGGACACCATCATCGCGCGCACCAGGGGGTTT
TCATCCTTACCCACGACGTGCAGAGCCAGCTCAACATGGGCCGCTTCGGGGAGGCGGGG

TABLE 1
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ACAGCCTGGTGGAGCTGGGCGACCTGGTGGTGTGCTGACCGAGTGCTCGGCCACGCGG
CCTATCTGGCCGCTGTGGCCACGCCGGGCGCCAGCCGCGCAAGN

Sequence 221

GATTTTGGCTNCTGCAACCTCCGCCTTAGGGGTTCAATGCAATTCTCCTGCCTCAGCCTC
CAGATTGGGATTACAGGCATGTGCCACCGTGTCTGGCTAATTTTCTTGTAATTTAGTAC
AAAAGGGGTTTACCACATGGGCCAGACTGGTCTCAAACCTCCTGGCCTAAAGCGGATCCA
CCTGCCTCGACCTCACAAGGTGCTGCGATTACAGGGATTACAGGCTGGGATTACAGGCAT
AAGTCACCACACCCAGCCTAAAAATTAAAGTTTATACTGTATTGTTACATTGTGATGC
AACTTTCCATATGTATTTCCAGAATCAACTATGTATCAAGGAATATTGAAAGCATAAAAT
GAGATCATGGTGAATTCTCTCCCATTTGTCATTCTTGNGGTAAGGGAATGAATGGTGG

Sequence 222

CNCGCGTCCGAGTTATTNATATAAAGAACATTTTCTGTTTTAGAGAGAACCCATTTATT
TGTGAAAGAAACAGAGTTTGTCTTATCCCTATAAACTGCATTTGCTGTTTCTTCTC
TAGCTGATGTGACATATTAGGGAAGCAGCACCCGACTGGGACTCAAAGACCTGGGTTTG
GAACTTTTTGATTACTAGCTTAGCTGTGTGAAATCAGGCAGATGGTATAACTTCTCTCA
TTGATGATGTCAATCTTTTAAAAATTTCTAGCAGTGAAATTTTAAAAATGAAATGTT
AGGTGAAACCTCAAACCTACAACAGTGGTAAATTTGGAAGGGTCTGGATGGAGTGAGGG
CAGGGAGGGGGTAAGTGGGCTGAGGGGCCCTCTTCAGCCTCTTCTCCCTTCAACCGA
AGTCTGAAAATCTCTGGCTAATATGGGTGGATCCCTAAGATTTCTTTGTACTTTAACA
TACCGAAAAGNTATTCTAAAGAATTTGGTATGGTTT

Sequence 223

CGCNTCCGCCGAGCGCAGCAGTCTCCCCCTAACCTCAAAGCCTCCTCAGAAGTAACCTG
GTATCAGTGGGCTGTGCAGATTCTTATAGTCTTCTTTGCCTTTATATGAAAATAACTT
TGTTTTATGTTTGTTCACATAGGTGGAATTATACTGACTCTTACTCTGTGACTTGCTT
TCTTCACATGACAGTAACCTCCTGGACTGTTTCTGTAGCAGCCACACAAGTCTCCTTTATA
TTGCCAATATCTATCTTATCCCAAAGACAAGATGAATGTTCAAAAACGGTAATCCAAAC
TCACTTCTAAAAATGGGTGTGTGTTTAAAGAAGAGCTGCTCAGCTGAGGCAGTTTGTCTG
CCGAGGGGATTTGAGCAATGTCTGGGGACGTGTGGTTGTCACAACTTGTGAGGGGGCTC

Sequence 224

GCNTCCGTCAATTTGCATCAGTTGCCTTAAAGAATGGGGTAGTTATAGGAAGCTCACAGA
GAGGAAAAAACTCTTCATGTCTACATTGCTTCTTGAACCTGATTTTATTTATAAAGAAG
AATTGTTGAGCTAGTGATAGAAGTTTCATGAATTCCTGGTACTAATTATCAGTTAAATG
ACCTCTCTGAAGTCTCTGGAGAGCGTTCTGTGTCACTAATATTGGTGAAAATTTGAAACA
AAAATGCTCTCCCATTTGTCCACATATTGCTTCTTTGAATTTGGTTTTTCGAGCCAAGAAC
TTAGGGTGTGAGAATATGTTTGTGGGGAAACCCACACAAATTTTATGTTAGTCTCTGTAC
ATTTAAATTTTACCTTCCTGATTACTTACGTAAGACTAAACAATTTAAGTTTCTAAAAAT
GCCATCACTTTTGCAAATAAAGGACTTTATTAAGNTGATAAATAACAATNATGGGCCAT
CAGCTCCACCTATAATTAATATCCTTGCCTGGCACCCCTGGAAGGGACTTAGCTTNTT

Sequence 225

CNTCCGCAATTACTGCCTTAGGCTAGATTTCCCATGAATANGAATTGCTGAGTCAAAGGT
TGACACATTNTTTAAAGGTTAGATACATATTAGTCAAAGTTTTTAAGCAANATGCTTTCT
AAGCCTNTTTGATCTTTATAANNCATTGNTCCTTTCTAAAAATATATACTGTCTTCTGC
GTNCCAAGGATAATTNTTTTATTAATATGGGGCTTCTTGTGTCTACTTCTCCCTTTTCT
GTTATTTCTTCAAATGTTTAAACAACTAATACATTTCAGAACACATTATGCTTNCATCT
TGTCATATTTGCAGTACCTTGTATCTCCTGGACTTTATGCAATGCGTGTGTGTGCACAG
ATGGAATATGTTNACCATTGGCT

Sequence 226

GCAGTGCCGGCGGCGCAGTTGGGAATGGGAGTGCGCTTGCAACAAGCGCCGACGAGCGATA
GCGACGCTATGCCCTCTCTTGCCAGGCGCCGGGTGGCGCGGATCAACCTGCTCTCGCAG
CAGCCCCTGTGGTGGCCGCGGTGATGATGCAGGAATCGTATTTGACGGTGGNCAGCTT
CGCTTTCGATCAACATCTTCGNCGAAGTTCGCGGTGAACCGTNCGGNATCGACATCGTGG

TABLE 1
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CGCTGGCATCTGCCGCTATACCAATCATCGAAACCGCGCTGGAAGGTCGGGTCCAGCGCC
CTGCAGAAGAGACGCCTCCAGCAGGACAAGGTGGCCTGCTCGACGAGCAGGCTACCCGAG
TGTCGTTGAACAAGTATCGCCTTGGGTCT

Sequence 227

CTGACACCCAGTATTGCCAACCTAAGGACTAGGAAGAAAGGGCTTACATGTTTCTTGCTT
TAATAATATGTGAATTAGAAAAGGTATTCAAGAAGATACAGGGTTAGAATGTGCATCTTT
CTTTTATGTAAGTAAATGTTTCAACTCATATGCAGCAATGTGGTNACCTTGAAAGATGAT
TCCAGAGATTTTCATGCTTCTGGCAGTTTCAGGTCACATTGGGGTGAAATTTGACATACTG
TAGTCATCCCCAAGGTAATAATGTTGATGAAATGGTATAAACCCCTGATACATTCTTAAGC
AAAATGAATCTAAAAGTTTGTTCAAAATTTTTAACGTTTTATGTTGCTCTGACTTTCCA
TATACTGATTTTTACATTACTTAGTGAAAAAAAATTACCTTTTAGCTTNTGGCAACA
AAACATTTTTGGCTATT

Sequence 228

CCNCGCGTCCGCAAGACAGGAGATTTCTTAAGGTCATATATGCACGATTTGCTTAAACGT
CATATAGCATAACTGGAAGAATATAGAATCTACCCAAAGCCTATGCTCTTTCTACTGNAT
TATTTGCTTATAATAGAGAATGCTAATCAGAATCACCTGAATAGTCTTGTAGAGGGTCAG
TACACAAGCCTAGGTCCTATCCTTCAGAGAGGTGAAATGGAGGCAAATATATTCTGAAAG
AGTTTCCCAGTTGATTCTGATGAGCACTACAATTAAGAAGTGCTGCATTAAGAGCTGTA
CATGGTGGCTTATGCCTGTAATCCCAGCTATTCTGAGGCTGAGGCTGGAAGATCACTTG
AGCCTGGAAGATCACTTGAGCCTGGGAGTTGGAGACCAGCCTCGGCAACGTAGTGAGACC
ATGCTTTTTTTT

Sequence 229

TTGGGAGATATGGCANGGTGAGAATGTTTGGGAAAGGAAGTAGAGACAGACATTGGATTT
TTGTCAGTCAANTTTCTTTGATTTTAAATATTTATTCATTACATTGTCTACATGGCAG
TTAATATTCTAAACTATAAACAAAATTTAATATAGAAAAAATATTATGCTTTTCTTTT
TGCCTTTGCATGCTCTTATTTCAAATAGATTTAAATTCATGGCATATTATACTAGAAA
ACAAGTCTGTCAATGATCTAAGCTTCTATCTTTAGATACTAGGAAAAAAGAGAAAAACCC
AAAGCAAGCAGAAGCAAGGAAATAAGAACAGAAATAAATGGAATTGANAAGAACTTCA
GAAATCAGTCAAACCTGAAGCTGATTTTATAAAGATTA

Sequence 230

CCACGCNTCCGAGGAACTGGCAGGGAAACAAAGTATCCCTGGAAGGAATTTCTTAAAGA
GGAAGAGGCAGATCCCTACAAGTTTAAATCAAAGAATTTGAAGATGTTGATCCCAAAGT
GAAATTGAAAGATGGACTTGTGAGGAAGGAGAAAGAGAAGCATAAAGATAAGAAGAAAGA
TAGAGAGAAAGGCAAGAAAGATAAAGATAAGAGAGAGAAAGAAAAAGTGANAGATAAAGG
CAGAGAAGATAAGATGAAAGCCCCAGCACCCCCACTGGTGTTGCCCCCAAAGAGTTGGC
CCTGCCCTTGTTCAGCCCTGCCACAGCCTCCAGGGTCCCAGCCATGCTGCCATCTTTGTT
GCCAGTGCTTCCGAAAACTGTTTGAGGAGAAAGAGAAGCCGAAGGAGAAAG

Sequence 231

NCTAGACTCCCTCTCGTATCATGGATCCCAACATCNAGGNATATGGNCATTTACGTGTT
GGGATCTGCTCTGCCATTGNACACAGCTATATTCNATTGCCCGGGNGTTGTGTATNTT
CCAAAAACGTTGAAAGGGAGGTTCAAGATATNCAGTTATTNGTATTATTAGTCGTTTTG
AAACTGAGTNGAAAGACTCATTNANGAAAGNTCCATATGCCTTCTTGTCTGTCTATGGCT
GGNNTGCTCNNGAGAAAAGTCCNCANTTATACAATTGTA

Sequence 232

TTTCCTTTTTTTGGGGGCGGGGTGCGCTCTGTGCGCCAGGCTGGGGTGACAGGTGGCGCG
ATCATGGCTCATTGCATCCTCAAATGCCTGGGCTCAAGCAAACATCAGTTTTCTTATCTG
TGAAATGAGGATAAAAATGTCTCCACTTAAGGGTTGTTGCAAGGAAGGTGTTGCCTTAGT
CATAAAAGCTAGGGAAGGTGTTCTTAACGAAAAACAATTCGTCAGAGACATGAAGGTAGA
GGAAGAATTCACACATGAAGGGGGCTGGGGAAAATGATTTAAGAAAAGAAACAGGCCTGG
CGCAGTTGCTCAGGCTTGTGATCCCAGCACTTTGGGAGGCTGAGGAGGGTGGGATCACCT
GAGGTGCGGGAGTTCTAGACCAGCCTGGCCAACCGTGGTGAAACCTTGTCTTCTACTAA

TABLE 1
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AATACAAAAANATTGGCGGGGTGTGGTGGCAGGTGCCTGTATTCCCAGCTACTTTGGAGG
CTGGGACGGGATAATTNCTTGAGCCCCGAGGCGGGGGTTTCCGGTGAGCCCCGGGATTGC
GCCCTTGCACTACAAGCCTGGGGCACANAAGCGAGGACTNTGTCAAAAAAAAAA

Sequence 233

CCACGCNTCCGGTCTCAAATCNCCTCAAGTATATTCAAATTTGACCACTTCTCACCAGC
ACCACTGTCAATTATCCTGATTCAAGCCTCCATCATCTCTCATCGTTACTGTGACCTCCTG
ATCATTCTCCTTGCTTCAGCCCTGGCCCTGCAGGCAGCATTAGTATTAAGCAGTAGAG
TTGTTTCTATAAAAATGTAGTCAGCTGGGTGTGGTGTCTCACGCTGTAATCCCAGCACTT
TGGGAGGCCAAGGTGGGAGGATCACTTGAGCTCAGTTTGAAGACCAGCCTGGTCAACATG
GTGAAACCCTGTCTCTACTAAAAATACAAAATTAAGTGGGCATGGTGGCGGGCACCTGT
AATCCCAGTTACTGGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAAAGGCT
TGCAGTGAACCCAGATCACACTACTGNTTTTNCACCTGGGCACAGAGTGAGACTGCCTC
AAAAAAAAAAAAAAAAAAAA

Sequence 234

TCGAGGTCAAGGACGGTTATGGCCCGTAACCTGCTGCCGCAGAATTACGCCATCAAG
TGGACGCGCGGTGCTGAGGCCAGATCAAGGACATCACTCGCGCCGTAAGGCTAAGGAG
ATCAAGTCCAAGGAGGAGGCTGAGCAGATCCGCTCGCAGCTGGAGCACCTGGTCTGCCAG
GTGACTGTCCAGGTGGCGGAGAACGGTGGTCTGTTTCGGGGCCGTGACTCCTGGCGATATT
GCGCTGGCAGTCAGGAAGGCCGGTGGCCCCGCCCTCGAGAAGCGGTCCATCGAGATCACC
AAGCCGATCAAGACCATCGGCAAGCACACTGTCCGGCGTCAAGCTGCATGACGCTATTAA
GGGTCACGTCACGGTCGAGACTGTTCCCGCCGCGTTGATTTGACGTACACGCAGANTAGG
GGGAGGGGGCATCCAACCTGGGTGCCCTTCTTTGCTTNCGTACACACCGGCGAAAGGTAA
ATGACCGAAAGTAATTCTTATTACNGTGCTTAGGGGGGTTTCGCCGCGCCGGGCGGTTAG
ACTTAGTCTAGAAGAAAAACCTTCCACACCTTCCCTTGAACCTGGAAACATTAAAAATG
AATGCNATTGGTGGGGTGGTAAACTTGG

Sequence 235

GNGGTAGCTTTGTGTATGTCTGGGCACTTCNAGGAATAGGGTGCAGGAGAAACGTCTCAGT
GTCTCCCCTTCGGAATCTTGGCTTCTGGAGGGAGAGATGCTGGGGTGGGAGTGCTCCTTG
GTGGAGTACTCAGGAGCTTAGTAAAAGCAGAGGGGGCTGGAGAGGCAGGCCTGGCCTGCA
GAGCCAGCATGGAGAAGCCTGGTGTAGGGCTCTCCAGCCTGCCAATTTACAGTTAAGAAG
AAAGGAGATATGTATATATATATATACACACACATACATACATACACACACACATA
TATACACACATATATATACACACATGTATACATATATATACACACACATACACATATACA
CACACATGTACACATATACACACATATACGTGGGGTGTGTATATGTATATATGTGTAT
ACGTATATA

Sequence 236

AACTGTCTAATCTCTTGACCTCGTGATCCCCTGCCTCGGCCTCCCAAAGTGCTGGGATTG
CAGGCATGAGCCACTGTGCCAGCCATACTTTTTTTTTTTTCTGGNGCATTCTGAAG
TTAAATATGTTGAGTTCTCTGCCCATTTGTTCAAATCTATTGNATTATTTCTGNNGGAT
TGACAAATGTTATGAACAATTTGGTTTCAAATAGATTTTTCTATTTAGCAACTTTCTAT
TCCTCTAGGACCTAGTATTAAGGTCATTAAGATGGCTTAATGAGTCATTAAGCCATTAAT
GAGTCATTAAGATGGCTGACCAATCTGTGCCATCTTTTTAGTGACATTTTGTATCAG
TGTCTCTTTGTGTATTTCTTTGATTTATATCTTGACAGTATTACATAAGCAGGAATAAA
AGAGACTTTGAGTGGGAATGTCTCGCTCAAATATAAATAACCTTATAAATACAATCTTTA
CTTCTCAGAGTCCTAAAATCTTCTTGTTAGTCTGGTCTTCTGGGTTGATTCAAGGTTG
TCGGNGACTAAATGGCAT

Sequence 237

TGTTNACCTTTGGGATTACACAATACTTGCAATCCAGCTCTGCCATGGGGGACATCATT
CACAAAGCACTCCTCACCAGTAGTCAGATGGCACTTGATAGCTACAGGCATGTGAATATT
CTTTTACTGTCAACTTTTGTGTGATTTACCTAAAATATGATAAGCTCCTTGAGGATAA
AGGCTAAGTCTTACTTCTTCTGATTTCTGGTAACCGCTTGTACCAAACACCTGCCAAGCA
TTGTTGATTGCACCTATGAGGAGGTGAGAAAGTGCCAGGCCGTCATGCCCTCTATACAA

TABLE 1
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ACATGTAACAGTAGACTCTGGTTCATCAAGGAGTAAATGACATGATATGTGATAGACCAC
ATACATTCGTGGCTATAGATAGGGTGAGTAACTGTAACCATATCCAATTGTGAGCAAAAA
GTGTTTAATTGGGGNGGTTTTAACTAATAAAATTGGCTAAATCATCATTTTTCAAGC
TCTCGAATCATCTGAAGACCTTTTTTTATTTTTTAANANTTAGGCC

Sequence 238

CGCTCCGTTGCAGTGAGCTGAGATCACGCCACTGCACTCCATCCTTGGTGACAGAGCANG
ACTCCATCTCAAAAAAAAAAAGAAATTGGGTTGTCTAGGCACAGTGGCTCGTGCCTGTAA
TCCCAGCATTTTGGGAGGCTNCNTAGAANAATCACTTGAGCCCAGGAGTTTGAGACCAGC
CTGNACAACATAGTGAGACCCCATCTGTACCAAAAAAAAAAACACCAGACCTGGTGGCAC
ATGTTTGTAGTCCCAGCTACTCAAGGGCTGAGGTGGGAGGGATCACTTGNNCCCAAGAAG
TCAAGGCTTCAGTGAGCCATGATTGGTGCCACTTGACTACAAGCTGGCAACAGANCCAAG
ACCCTNTTTAAAAAAAAAAAAAAAAAATNGGNTTGGGTTATAGGNGAAGTTNCCTGG
AAACCTTACAAAACAAGAACCATGTTTGGGGGAANCAANTGGANGGGGTNAAANTGNCC
NCTTGANGCTTNTCCTTTNGNGGNCCNTAATTA AAAANGTTTCCCNGGTNTTGGCCNGG
GNCCGGAATAATNCCTTNGAATTTCTTTAGCCCTTTTGGGGNGGGCAAAAGCCAGGGNGG
AATCCCNCCNNGGNTCAGNGATTTTNGNAACCNACCTTGGCCAAAAATNGGGGAAAAACC
CCNGTTTTTTTTNTAAAAAATAACNAAAAANTTTNCCCCCTTTNCTTTNGGGGGGGCCCA
CANNNNCCCCCTTTTTTNATANANAANAANAANCCCCCCCCCCCCCCCCCCCC

Sequence 239

CATCTCAAAAAAAAAACTCACACATATTTTATGTACACCTAGTATCAGTGAGATTTTTTA
ATAATTAGATTTATTATCTTCCATATTGNNTACAAAACCTTTCTTCAACTTCATAAAAAAGT
CAAGTAACATACTGTACTTACTTCTCTCACCTCATTTTAAATAGTGGATAAATTGTCAG
ACACAGTGACTCTGCACCTGTAATCCTAGCTACTTGGGAGGCTAAGGTGGGAGGATTGCA
TGAGGCCAAGAGTTCAAGACCAGCCTGAGCAACACATAGAGACCCTATCTCTTTAAAAAA
AAAAAAAAAAAAAAAA

Sequence 240

TGTCGACCCACGCGTCCGCGCTCCTGTCTCCCTTGGGTCTTCATTTAAATGCCACAC
CAGAGAGGCCCTCCCTGGCCACCCTAATGAAAACCTTCAACATCCTCAACCCTAACATTTT
CTGTCCCCTGGGTTATTCCTCCCCCTTGGTATTTATCACCATTTAATGTACTATCTGGCG
GGCATGGTGGCTCGTGCCTGTAATCCCAGCACTTTGGGAGGCCAGGCGGGCGGATCACC
TGAGGTTAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAA
TACAAAATTAGCCAGGCATAGAGGCATGCCGCTGTAATCCCAGCTACTTGGGAGGCTG
AGGCAGGAGAATCTCTTGAAACCGGGAGGCAGAGGTTGCAGTGAGCCAAGATCAAGCCAC
TGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAACAAAAACAAACAAACA
AACAAACAAACAAACAAAAAACCCAACAAACCCACCAACATACCATATTTGGTTTCTG
TAAAAAATAAAAAAGAGAGAGAGAATTTTTAAAAAACAAAAACCATACTATCTAATTTA
CATTTTTAATCT

Sequence 241

CCCCGCGTCCGCTAAGGCATGTGAGCGCCTTGTAGGGCACGTTCTGTCTTCTGACTACAT
AAGCAACACTTTTGGCACCCTAAGTCACAGCACCCACAGCTTTTGGCAGGATACTTTAA
ACAGAAAAACACATCATTGATCCTGGCAGGATTTTTTAAGGGATTGTGCTTAAGAATGT
TTAACTTTGGTAATCAGAGACCACCACTGGTGTCTTTCTCCAAAATCACATCTTTAAGTT
AATTAATACTTGAAGTTAATAAATAATACTGCTCAAGTGTATTAGTAATGATGCCATAAT
ACCATGTGAATTTATGCTGATTCAAATGTTGTTTTTTTCGTTTGATACTCATATGGCCTT
CTGTTTTGAGGACTTCAGATTATTTAGCAACTGATTTAATCTGGTCAAGAAATAAACTTT
GCTTCAGCTGGAAAGCGTGAGGCTTGAGAAAAGCAAGGTTTTGGACAGGGGACCTATGAA
GCTCATGTTGAACTTAAGTGTTTTAAGGCTGTATGGGAACCTTGGAATGGGAGTGAAAAG
AACCAAGCCGTCTACTGNCAAGGTTTTTCCCTCCTCCTCTAAAATTTATAAACCTCATT
CTTAGAAGTGGCAAAAAGTTGGGAACCTTTTCCACTGNTTCACTTCTNNTANTNAGGGGA
TTAAGGNGGATNGGNAAANGGAAGTTTTCNTGGTTTTTAAAAAANNGNANAANGGG
GGG

TABLE 1
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Sequence 242

GNCACGGCGGGGCAACCTGGTTCCTGGGCGGTAGTCCCGGCAGCTGTGCTTCCCCCTT
CACTGCAGTGCGTGTTCAAGTTGGAACACGAGATTTACCTTTACTCCCTGGCTATAGG
GGGATGGTGAGAANGGGGCTGCGTGTNAGNGANATTCAAGGCATAAATCTTAGNTTGTCTC
TTTTAAAGAATTGNGTGCCGGGACGTGNTTGGAGGNTGGGTGCANANAGGAAGAGGCGAN
CTNCTGGAGGANGCAAAGGACAGGTCANTNTGCGNANTTCNGNNNGATGCTGCTGANTGA
ACCCCNNGTGTGTNGCCCCAACAAGAAAGGCTNNGCTNNGATCAAACATTTACTGNACC
TANAAGGCCACATTCTNGCTTAANNANNCCAGGAANGCNCNTTCTTGTTNCCCATACCA
AAATCATTNACACTTGGTTTTGGCCCNACATACCTTTCTTTTNGACCANNGTCTGGN
NNAANGGCANTANACNNNGNATNTNNCNTCATNACANGAATAAAAAGCCNCAGAACN
CNACANANGNGCCCATCACTANNNNTANAGATNTCAAAAGGGGGCCNGGATCCTTNACC
ANAGAANACTCTGGTCCNNAGNGNAAGAAAGNAAAACCCCNANANGCACTGGGACNNT
NTNATANTTCTNNTTNAACAAAANCTTATAANNNAAAAAAAAAAATTTTT

Sequence 243

AATTAATAAGCCTCCTGGGTGATTTGGCTGCAGGTGGTCCTGAGACCACACTTTAAGAAA
CACTAATCAAGAATCAAGGCCTTATGACTCTTAGTCCTGTTTCTTCCCAAAGGACTATGT
TGCCTCCCTACATTCGAAAACATTCCAAACAATACATAAGAGTCTTTGTAATTCACATTA
GTGCTCGTATTTACTGACTCAACAATTAAATCCTGATTGAGTCATTGAGTAATTTT
CTTTTACTCACTCAGCCTCTGTGGTTTGGCAGGAGCTACAAATAAAAGATTAACACAG
TCACACCTCCAAGGAACATCATATAATAGTAACAGAAGTAAGTACCATTTCTTGAGCACTT
TATTTATACATACCGTCATACAGTTTATCTCATTACCTATCTCATTCCCTGCCTTTCAG
TAAGCCTGTATACTATTATAACCGCATAGTTTGGGAATATTTATATATATATATATA
TATATATATATATATATATATATATGTATAATCACATATATTCTCTCAACTGTNCT
TTACATTTAATATGTCTTAAAAGTATTTCTTTGTGAGTCTTGCTTTATATATGTCTAGT
ATTTCTTTATAAGGGCTACAAGAAGTATCCCTCAAGCATTGGATATTTCAATCAAATTAC
CCTGGGGGGGTNGGGGGAAAAAATNNGGGGGGGNTTT

Sequence 244

TCGCCCCGCGTCCGGGGAAGGCTAAGGCGCGAGGATCCCTTGAGCCCAGGAGTTCTAGGC
TGCAGTGAGCTATGATCACGCCACTGCACACCAAGTATGGGCAACAGAGCGAGATCCCATC
TCTAAACAAATTTAAACAAACGAACAAATGAAAAATATTGCTGTCTTAAGGTTGGGAAG
GGGCAGAGACCCCTTTGCTTGCTCATCACCAAGACACTTCTGTGAGGCCCCAGGGCTCTT
TGGAGAACGTTTTGAAATCACGGTTCTAAGTAATTATAGTTACTGTGACTGAACTAATT
TAGCCCTAAGCTTCTACAATCAAGATAGAGATACACTATGGACTGCATTTCTCCGCTTC
AGATTAAAAAAAAAAAGTTAAGTCAGAATGTAGTTATTTTTAGGTAAAATGCTCAAT
ACATTTTCAAGATGAAGCTGCTCAAAATTAAGCAGTGAGTCCAAGGGTTAATCTGNAAA
AAAAAGTACAATTTACTATCTCCTGGTTNCANACTTATAGACCCTCATAGGTGCATTGGC
TAATACAAGGGGCCACTAAACACATTGTGGCATTACNGGATTTTATTGGTGAAGNGCTC
TATAAGTTTTATTGGTGCCAGGTAAAAGAAANGCCTCNTATAAAAAAATGGTGGNGGGGG
GTTTTTTTTTNNCCCCCTTTTT

Sequence 245

TTCCGTACCTAAGAATTGTACCCTTTCATAACAGCACCCTTGGATATGTAGAAAGAGTT
TGTTGTGAGATCAGATGTAAACAAATAAAAGTTATTCGTGAAATGATATGGAAGACTGG
GATTAGAAACTGTGGCATTCAAGAAGCCAGTTAAGCTGTTCTCAGAATTGACAGAGATTCT
TAGAGATGGTGTAGTGCAGATGGTGTAGTGCAGGGATTCTCAGCCTCACTGCACATGGTA
ATCTCATAGGAAAATTTAACAAGGACAGATGCAGAAATTCATTATAAAGTGCAGGACT
GAAGTCCAGAGGTCACTATATTTTAAAAAGGTCTGCAAGTGATTGTAACATGCATCTATG
GAGGAAAACATCANCCTAGGAGAAAAAGGGAAAGAAACCACTGGAGTAAAGGCTCTGTC
TTGAGCACTGTGCTGGCTCCTGTCTCATTCTCCATCTCTTTTATCTTCATAGTAAGTGAGA
TGGGTTTGACAAATAGGGA

Sequence 246

CGGTCCGGNGTAACTTGAACNAAAGTATTCTCCTTCTTCTGTATATTTGTTCTCAACCCC

TABLE 1
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CAATTCCTCATAACTTTCTAAGTAAGTAGGGTGAAAAGAAAGTCAGGGCTGCCTAGGGAA
GCTACATTTGCTTCTCAAGGCTTGCACCTGCATATTTTCATGCCCCGACATGTTGCTGAACA
CAGCCGAGTAAAGTGCCAGAATAAAATCAGCTCTGTCCACGTGGTACCAGGAATGCTGCT
GAAATGAAGGTAAGTATAGGATTCACAGGATCTAAGACAGTCCAGGGAAGTGGGACCAA
TTGTGGGAAACCTCAAAGCTGAGCATATTTGAAGAAAATGCAGAGTAAATGGCTATGGG
CTGCCGGGAGGCCTGGATTGAGATACCAAGCACCCTGATATAAACACTGATGCTCAGA
AAAAGAAATGATGAGTGTGTATTTGTGTCCCTTGAGACCTAATTTAATTTATAATTATTC
ACCAGAGATAAGAGGCAAGGGATGTCTACTTGCTGGATATCTGAATTTACACAGTTCTCT
AGTCATTAGTATTTTTTACAAATATACCACTCAGACTAGGGGGGCAGAGGATCTGGGGTT
TNAATTTCAAGACCTGTCACTTATCTGCATGAATTTGNAGCTTATAAGAACTTACAGGT
TAACCTTTTTT

Sequence 247

TGTCGACCCCGCGTCCNTNGTATTTATAAANATAATNCTGNTAGATAAATAAGTGATTCA
TATTTTGTCAAANCTATTTTAAAATTTCAATATTTAAAATATTNTTGAATCACTGGGGTGT
CGNTAAGTGGCATCATNNATGAGATTTGATTCCATGTACCATATAATNTTAGATTGGTCC
TNTCTACCCCTTTTAAACTCCTTCAAGCATTGCTATTACTGGGGTTGCCTTTGGGAAAA
CTTACTTCTAGATACTACCATATATCTGAAATAGTAGAGGTGGATGTTAATAAAATTCAT
AAAATNATCATGTATTACTTTTTTTGATTTACCACTGGAAGGAAATACAGNCATGTGCAA
TATAATGACCGTTTTTGGTCATNGAGACCCACATGTGTGACAGTGGTCCCATAGGATGNG
GCTGAAAANNTCCTGTTGCNGCCTAGTGACACTGTAGCCATNGNAACNCCATAGCACGAC
ACGTNACTCACCTNTTCATGGTGATGCTGGTGT

Sequence 248

CCCCGCGTCCGATTTTGAATGTATTGAGACTAAAGTTCCTTTGAAACATTAAAGAAGATC
CATCAAAGTGGCAACTGTATATAAGGTCTGATATCTTCTGGCACTCAGAGGGAGAGTTTC
TGGTGGAGGTGGAAGTGACTTAGGAGTCATCCATGAACATAAATGAGATCACTCGTGTAG
GGAAGAGTTAATGAGATTAGAGAGCCTTGACAGAGCCTTGACGCCAAACCCATGAAAG
AGCAGTAATAGTGAGTGAATTACCTTCTGAGGCAGTGCAAAGTAGATAAGAAAACAAAAN
CTNNAAAAAAAAAAAAAAAAA

Sequence 249

CCGCGTCCGCGAGTGGTNGTGATCTCGTCTCCTGCAACCTCTGCCTCCCAGGTTCAAGCAA
TTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGATTATGTCTTGTTANNGAAA
TCATTCAATTTTTTACCAGAGAATAAGGAAAAGCAAATTAGACTGTGAATAAAATCTCCA
TGTACCCACTAGGATGACTACAATTCAAAGGCTGACCTATCCAGGTGAAGATGAGAGTG
TGCAGCATTGGAATTTCTTACACATTGCTGGAGATTTAGAAGCTAAAGAAAGAGGACAAA
TGATTTGGAAGCAAAGATAAGAAGGAAGAAGGAGATGGGGTCTTGCCATGTTTCCCAGGC
TGGTCTCAAACCTCTAGATTCAAGTGATCCACCTGCGTTGGCCTCCCAAAGTGCTGGCAT
TATAGGCATGAGGCACCATGCCAGGCCTGTTTTGAAATTTATACATATTTATAAACAT
ATTTTCAGGATGAGAGAATATACCAAGAAGTTACATAGCATTGTGTATCTGTATAGAATA
AAA

Sequence 250

TCGACCACGCGTCCGGGTGAACGTGGTCACCAAGGCCATGGGTACCCTGGGGGTGAGCTT
ATCCTCCTGCAGCGTCCCTGGTTCCAAACCCACCTTCGAGCTCTCAGCCGACGAGGTGGA
GCTGGGCCTGGGGATCCACGGGGAAGCTGGTGTGCGCCGGATAAAGATGGCAACCGCCGA
TGAGATTGTGAAACTCATGCTCGACCACATGACAAACACCACCAACGCGTCCCATGTGCC
TGTGCAGCCCCGGCTCCTCAGTTGTGATGATGGTCAACAACCTGGGTGGCCTGTCAATTCCT
GGAAGTGGGCATCATAGCCGACGCTACCGTCCGNTCCCTGGAGGGCCGCGGGGTGAAGAT
TGCCCGTGCCTTGGTGGGCACCTTCATGTGAGCACTGGAGATGCCTGGCATTCTCTCAC
CCTCCTGCTGGTGGATGAGCCTCTCCTGAAACTGATAGATGCTTGAAACCACTGCAGCAG
CCTGGCCTAACGTGGCTTGAGTCTTCACTACTGGGCGGAAAGCGGAGCCGGGTAAAGCC
CTTGCCGAGCCCCAAGAAG

Sequence 251

TABLE 1
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GTCGCCCCGCGTCCGCAAGAAATGATGTTAGTAAAGATACTTTAATTGCGGGGAGTTCTC
TGTTGGCTGGTGAATAAGGACGTTCTCTTTGAGTTCCACCTTTCTTTGAGAAATTTTCAT
GTTTCCTGTACTTTTCTCTATTATATCATGGAACTTACTAAATCAGCCTGTGCATTCC
GCCACATATTCCCTCATGGTGCCTTCCGGTCTAGCAGCTGAGCCAGGGCCATCAATAA
ATCTTCTTCTTTTCCCCAAGATATTCTAGTTGCTTCTTTACTATTCAATCTTGTAATT
CCATTCATCTGTGTGTATCATTTAGGATGCTGGGCAGTTGCATCGCATTTCACCTAAGGT
CACATCCTGATGGGATTTGGTGGGATCCTAGAGCTGGCTAGGACCACTTGTGAGAGCTGA
TTGTTAAATTCTCCGAAATGACGTGACTCAAGTTGTTAGACTGCTTAAAGG

Sequence 252

CCGGTGAAACCTGGAGCTGAAGTGAATTCTCTAGAGTATATTTTGAACCTGTAAGGAGTTCT
CTTTAAACACTTTTGGAAATTTAAACAGCCATAAAAATTCTTGTTATACTGAAGGAGTTCT
CTGAGGCAGTGTGCCTCTCATTTTACCACCTAAAGTTGCCATAGAGGTCCAAGGAGACAC
TGCTGATAGCAGAAAGTCTTCCAGAAAGAAATTAGGCGACCCACACCAAGCATGTATGGC
TTTGAGTCTTACAGATGGCTTTTAAATAGTTTAGTCTCTTAACCTAAGGAAGTTTCTGAA
GTTCCGGTCAGAGAGTCTAAAAATTCACATTTTACCTAATAAATGATAATGAGGCTATTT
ATCTTGTCTGTCTGGATTTTTTCACTTGACATTTAATGAAATATCCCATATTACCTATAA
TTTTTATTTGAAG

Sequence 253

CCCCCGCGTCCGAGATAATGCTGTTTGCTTCCGGCCGCTGTAAATCATAGGTGAAAACC
AGTAGCANGTGCTCACTCAGTGCCTCCCAGAAGCGGTCTGCGGGTCTCAGCTGGGCTGGG
GGCAGTTTTTATTGGGCAAGGCTTGGGCTTAGCTTGAAGCANGGGCTGGGAGAGGATGG
ATGGGGGTGTGAGAGCAAAAGAAAGACCTGGCTTTGCAGTGATGGCANCCACGTTCAAA
TNNNAGCTCACCACTGACCNCTCGNNTGACNGCGCCAGGNGTTAGGAGACTGNAACTGN
TTNTGNGTNNNGNNTCCGGNCGTNCATNNNNCTGCTCAGCATACANANCTNTTNTCTNA
TCNTAATCCTCATACNCTGACTGNNNACTNTACACTGTTCTACTTATCAATGACAGGTC
AAAAGTGTTATCATNTGTGACNTAGAATGAGTGAAGTACACNCCCTCTTGAAACTATGA
ATGACTTAAAGAATCACCNNTTGCAAAAATC

Sequence 254

GCCTTCGCCCTGCCTCCTCTTGGCTGCGGCTGGTCATCTTCCACCTCCACAGTGGGGC
GAGCTGCCAACCAAGGGGTACACATGTGCCCTGACATAGGCCAGGTGGTCTCTGCCCT
CTGTAGCTCCCATGAGAGAGGGCTCCTCGGACCGAAACAGGAGGCCACTGCCCTTGCAGCA
CACACCGTGGCCGGGTCTCCTGCGGCGAGCGCTTTCCGTGTGTGGGAAAGTCAAGGGCA
GCCCCGAGCCTCGAAGCCAGGCTCCAGCCCCGCGCCATGTTGCATTCCCGCTCTACT
CCTTGGTAGGCTGGNTGCTTTGAGTGGTTCTTTTAAATCTTTCTGTTGGTTTCTCCTTT
TCCTTTGCCTGGGTTTTGCTTTAACCTCTCTGTTGCAGAGATGCAGAGCACTCAGAGAGC
CTATTTCTATCATCGCTTTCCTATTCTCCACCTAGAACCAGNTGACTGGCCGCCCCGAGTG
GNGTCTCTTGTGTGTGGTGCCGTCAAAGCTGTGCAAAGAAATGCTTCTGCCTAGGTTT
CTTCGCGCCCCCCCCCTTGGCTTTTCTGCTGCTTACACCCCCGGTTCCTGATCTG
CCCTGGGC

Sequence 255

GCCCACGCGTCCGCAAGANAGCTCCTCAGATTTGTCATAGACTATATTTAAAGAAAGGCC
ACATTTTTCTTATTTAAATGCATTAACAATGCANCCAATTAAGAAGTGAAGTGGAT
TTGTACAAAAGCAGGGACTAGGTCTGNTTTGTTCACTGCTATATTTCCAATGCCTAGAAC
CATGTCTGGCAAACATACTGGCATGGGAAGAACATTTCCATAACCCCTGAATGTTCTGTG
CCCCTTTCCAATTAATCCCTACCCTCAGAAGCAACCACTATTCTCATGCTTATTACATTA
GTTTTGCCTCTTCTGACTTTCATATAAATGAAATCATACATCTAANAAAAAANANAAAA
AAAA

Sequence 256

TCGACCCCGCGTCCGATTTGATATAAATAGTTATGTTACTCATATAGAAATCTCTTCCCC
ATTACACACATACAAACATTTATCTATGAGTGGCTTATAATTGCAAATAAGATGTAAATC
ATGCTCATGATCATTGTCAAATTTGTGAAAGATTTTTTCTATACCTCTTTAGGTTTGT

TABLE 1
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TTTGTGTTTTGTTTTGATTTCAGGTGGCATTAAAGACAAGAGGGAATAATATTCATTCT
TACTTCTACTCCCAAGTCACTAGTTTGCTGAATTTAATTGAGTTAAAGAATTGTATCAGT
CTTCTTGGAAGTCTAATACAAAACCAGTTCACACTAGTTATTCATTCTTTGCTAATTCA
CCAGAATTGAAGGATGGATAAAATGAGAAAGAGAAGTAGTTCTTCATATTATTAATAA
AGAGTTAAATTAGACACTTTGTTGGACTCTTTGGTCTTAATAATTCCTACTCTTTTGAG
GTCCAAAAGTTTTGCTTTGATAAATAATTTTAATGGG

Sequence 257

AAGTTGGGAAAATAATTCATGTGAAGTACAGTGTGTTAAGAGTGATAAGTAAAATGC
ACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGCACCTGGGGAG
TGAGAGGACAGGATAGTGCATGTTCTTTGCTCTGAATTTTAGTTATATGTGCTGTAAT
GTTGCTCTGAGGAAGCCCTGGAAAGTCTATCCCAACATATCCACATCTTATATCCACA
AATTAAGCTGTAGTATGTACCCTAAGACGCTGCTAATTGACTGCCACTTCGCAACTCAGG
GGCGGCTGCATTTTAGTAATGGGTCAAATGATTCACCTTTTATGATGCTTCCAAAGGTGC
CTTGGCTTCTCTTCCCAACTGACAAATGCCAAAGTTGAGAAAAATGATCATAATTTTAGC
ATAAACAGAGCAGTCGGCGACACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAAC
AAACAAATGCGGGTTTATTTCTCAGATGATGTTTCATCCCGTGAATGGTCCAGGGAAGGAC
CTTTCACCTTGACTATATGGCATTATGTCATCACAAAGCTCTGAGGCTTCTTCTT

Sequence 258

GAGTCGACCCCGCGTCCGCTCTGGAGGAAGCATAGATTAGAATCATGATTTTTATCTATT
TTAAGAGAATAGAAGAACAGAAGGGGTTACAATCTTGCAATATTATGCAACTCTTCTGCT
CTAATATATCAAAAACCTTGATGATCCAAGATCATGCAGAACAGCTGAGAAGAAATCAAAG
TAAACAGTGTACCTTGACGCCAACAGATCCTGCCAATATGAGATTAGAATCTCCATCCT
AGCAAAAAAAAAAAAAAAAAA

Sequence 259

CTGGTACCTGCGAGTCGCTGCAGCAGCTGTGGCAATTGTCACCTTCATCCAGGCCCATCC
CGCTTTGAGGGCCTAGAGAGAGTGGGCCAGAGGTTAACCCCGATTCTCTGCCTCCCCA
CGCTGGGCATCTGGGTGTGCCAGGGCATTCCCCCGCTGGTCAGACAGGTTTTTGGGCCAG
GGCGGGGCTGACCAGGGTTAATTAGAGGGAAGTGGCTAGGAGGAGCTGGGGAGGGGGCTG
GGCAGAGTCCAGGCCTNCAGAGCCCTGGGACACAGCAGGTGTGTGCTGCCATGGGCCGG
GGCTTGAACCTCTGCCAGACTCAGGCGCCAAAACGGCGCTTGCGACCTCAGGTCCAGAAG
CCCCGGCAGCAAGCTG

Sequence 260

TCGACCCCGCGTCCGAAACTCTGTCTAGTCTAAACTATTATTCTATACTTCTCATCTCTA
TATGTTAAGGATTGATCTCCAAGATAAATTGTTTTTGTGNTTTTAGGGACAGGATC
ATGCTCTGTTGCCAGGCTAGAGTGTAGTGGAACAATCATAACTCACTGCAGCCTCGAAC
TCCTGGGCTTAGGTGATCCACCTGCCTTGGCCTCCTGAGTAGCTGGAATTCAGATGCAA
GGCACCATGCCTGGCTAACTTTTTAAATTTTTCATAGAGATGGGGTCTTACCATCCTGC
CCAGGCTGGCCTCGAGCTCTTACCTCAAGCAGTCTCCTGCCTCAGCCTCCCAAGGCAC
TGGTATTGCAGGAGTGAGCCACCACGCCAGCCCAAAATAATTNTTTTTAAAGCAAGAT
GTAGAAAAGTGATTATAATATGTTTCCATTTAGGCAAGAAAAAATGGAGAGGACTATA
CCTGTACTCTCTGNACATAGGATCCACAGAAAACCTTCTAATGGATGGTTATCCCTGNGGN
GGGAAACTGGGGGACAGGGAATGATGAAGCAGGAAAATTTTACTGGATAAACTTTAGTT
CTGGTGGCTCTTTTCTTCTATCATGNGNATGGTAACTT

Sequence 261

GTCCCGCAAAGCCTTTAAAAAGAGTCCGAATTTCACTTTTACCTTTTGTAGATGTGCAC
GTGTAGCTGTAGAGCTCATACTTACGTTTCACATGGCATAGTTGATGGATATGTAGGTGT
AAAGTTTATGGTAGTGGACAGGCTGAGAATGGTGTATCTGTGACAAAAATCTGATGGAA
GTGATATATTTGATATGAAAGTGAACATTTCTTAGTTGGGTGTTTATAACTTTTTTTG
GTAAATTGTTTTAGTTTTATCCTTATTTTACTTATGCTTGGCAATAGATGGTCTTTT
TCCCCAAATCTTCTTGAATCCAAAGGAAACACTGTTTTAGCATTATTTGATTACTTT
GGTTCATTCTTTTCTCCACTCCCATTTATTTGTTTTCCATTTTGTAACTTCTATAAGCA

TABLE 1
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GATAAAATCTGGAACCTCTAGATCTGACCTTCATGCCTTGCTTTTCTATGGTACTTAT
TCTTTCTGTCTCCTTCTCATTTTGGATTGGGCTTATGAGAGAAATCTGGGGTTGATCTT
CCAGCTCACTAATTTGATATTCATTTGTGTCTCTTCAGTTACTTAGCTTGCCTGAAAAC
TTTTTTTTCAGCAATTGTGTACTTAATTTTCATA

Sequence 262

CCNCGCGTCCGTGCCCTGGGGCCCCCTGGGCGAGCATACCCTAGGCGTCAGGCCTGGAG
GTCTCCTCGGTGCCTCCCAGCTCTTCTGTGCTCCTCACACTCTGCTCTGNCGCANATTGGC
TGTATTTGTAGGTTACTGCCTTTATTTCTCACATTTCTTTTTGGTGAGAGTATATCAAT
CAATCAATCATCCTCAGACCTCTATGATAACACTGTGCCCCACACACAAGAAGCTACTCA
ATTAATGTTTGTGTTGTTGAAATGAGAGAAAATATTTGTCTTAGTACAGAAAAGAAGATGA
AGCCAACCTCTGATAGAAGCCACCCATAGACTAGGGTGTGAGCTGCCTTCCAA

Sequence 263

NCCCCGCGTCCGGTAGTTGCAGAAGCATGTTCTTGAACCTATCAGTCCTGACCTCAGATT
TCATCTTCTTCTGGTAGATGTAGCATACATCTCTGAGTGTTATTAGAGGACCAGNCTAGA
GCCTCATCGTACTCCTTCAGTTACTTCATAATCATCCAGCTCTTTATATTAATGTTTTT
CTGTTTAAATGGCAGCAATGTTTTTATTTTTGAAATGGTCCCTGACAGCAACAGATC
TTCTCGTGTTAATTATTGAGTCTGTGCTGATTACACAGAATTAAGGATATAGTTTCTAA
AGTACTTCCATTTTTATATTTTTAGCATTATTCTGAAAGGCCTGGAAAAAACTATTTT
TTATTCGATTTGAAAGTGAAGTGACATAGGTGGGTCGCTATAGCAAGAAATTACCCTGTA
TTTTCCATCTCTATCATCACAGGCATCTCACAGAATTAGAAGTCGGACATTATTGATGG
ATATATTAGTCATGAATAATTAATAACATTAAATATAAAATGGGTCAGATACGGGCAGA
TTT

Sequence 264

CNCGCGTCCGGGAGAAAAGAGTTTTATACCTAATTCTTNTGCAAGTGATTACATATTTTT
ATACCCAGGATGTTTCAGCAAGATGAACCTTTATTTTTAGATGTATCTATGGNTTTTCCAC
CCATTTTATTAATTTTTAGAAATATAAAAGTGCCTTTAAATTTAGCTGGGTAAAGATAG
TAAGTTTTAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAGC
CTAGATCGTGCCATTGTACTCCAGCCTGGGCAACAAGAGCGAAACTCAGTTTCAAAAAA
AAAAAAAAAAAAAAAAAAAA

Sequence 265

GATCCTCTAAGTNCCCAATGATCNGAGAAGAAATATGAAAGGGAATTTTAAATATTTTG
AACTGAATGAAGATGAAAATGCCACAGATAAACTTTGCATGGGNAGCTACATTAGTTA
GCTTAGAGGGAAATTTATTTTTAAATTTCTTATATTAGGAAATAAGTCTTACATAAATA
ATCTCAGCTTCCACCTAAGAAGTTCAAAATAAACCCACAGTAAGCNGAAGAAAGGAAATA
ATAAAGCTGAGAAAAAATCAATAAAGTTTAAAGAGAAAAATTAATAGATATCAATGGAAC
AAAAGTTGCCTTTTTTAAATATCAACAAAATTGATAGACCTTTAGCCAGAATGATCAAA
AAAAAAAAAAAAAAAAAAAA

Sequence 266

CCCGCGTCCGCCTGAATTTTCAGAGTCNGTTGAGAAGGTAGGGAGCAGGGATCTCTCAGAC
ACCAACATGTTTCAGCTTTATTATAGATAAGGCTGAATTGATTTCTGGAATNGACCTTAC
TTCCCCACCTCCAACTGCAGGCCTTCCCCTTGCAAGTTTCAAGACATGTTAAGGTAAGTT
CACTGCAGAGATAAACAGGGTGAGGACAGGCCAGTCCTAAAAAAAAAAAAAGAAAAAAA
A

Sequence 267

CCGTTCTTTTTCCNAACTAAAGAATGCATAGGACATAAGTTAAAAGTTCATACATAACC
TGGCTTCAAATCCAGTTCTACCACTACCTGAAAACATCAGTTTATTTCTCATCAATGGGT
TGTTATAAGTACCTAGCATAGGGTATTGCTTAAATGTTAATACTCCCAATCCTGACACT
AATGTTTCAGGGAAGAGTGAAAGAAATCACATTAACCTCCACATTATTGAACATCTTCTGT
GTCAGGCTGAATACATCTTTGTATCCATTGTCTTCTGGTTGTTTAAAGACTAGTGTAGAA
GCCTGACATGTAAATCGGTGATTATATAAGATAGTACTGTCTTGTAAATGTGTTGTGCTAG
AGAGGTTAAGTATTAATTATTATGGGAGCTCAGGAGAGGCACCCACTGGCTGCTGGGAGA

TABLE 1
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AGAGCAAAAACCTATATATAAAGCAATTTTAAAGATTTTGGTTCTATAAGGGTAGAATGT
TCGATCCATTAGTGTATTCCCAAAGTCCTATACACATGTCAAGATCGGGAAAGCTCACAC
ACACAATAATGCCCAAG

Sequence 268

CGTCCGGCCCCATGCCAGCCAAGTTATGTTGTTTGGTCAATTTTAGATAATTA
AAAATCCTATGTAGTAACATCCTACTAGGAAAGAAGATAAACTCAANTATCCACTGAGTG
GTGACCTGAAACCAAAGAGACATGGAGGGGCAGCCAGTCAAAAGCCACTGCACTCCAGCC
TGGGCAACAGAGCAGGACTGTGTCTGGAAAAAATCTAGAAACATACTCAAATGT
AACATAAGAAGCTTAGCATATGGTAAAGTTGTGACTGTGAGTCAGTGCAGAAAAGAAATGA
ATCAATCAGTAAATGGTCCTGGGAAAACCGGCTATTTATTTAAAATAATAACAAATAT
GCTGTATATCATCAATGGATTAAAGATTTATACCTTCAGCATATGTCCTTAAATGTTT
TAGAATAAAATATATATGAATTCATGTAATTTTGTATGTGAGGGAAGGCCTTTTAGACA
TGACACAAATGTCAAAAGCATAAAAGGAAAGATTTTGAATAAATAATAAAC

Sequence 269

GCGTCCGACAGATACACCATCATTATAGGTGGCCAAATCATTCAAATCGCTGTTTGCTTC
TTCTCGGGCTCTTATTCAAGCTCACGATGCTATTCTCATAGTGATTGCGAATCTCACTGC
ATAAAGGTGATTTTGAAAACATCACTTTTCTCCACACTAATGTGTGAGCTTAGCCAGAG
TAGGAGATATATCTTACTTAAAAA

Sequence 270

CCCTTTTNCGGCCNTNCGGGCAGGTACGCGGGGAGGTATGCCCGTGTGAGCCAGGAA
AGGGCTGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTTCCGTGGTGCCAT
CTACATTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAG
GTCCTGAAATAAGTCACCATGGGGGAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCA
TTCCGATCGCTTTTGGCCTTGATGATTTGAAAAAAGTCCTGTTGCACCAGATGCAAGA
TGCTGTTGCTGCACAGATCCTGTCCTGCTGCCATTGAAGTTTTTCCAATCATCGGCAT
TGGGATCATTGCATTGATATTAGCACTGGCCATTGG

Sequence 271

ACCGCGNGGCTTCATGCAAGCTGTGGGCATGGNCAACGATCACGAAAATCATNTTCCT
TTAAATAAAATACAATCCTATNNAAGGAGTNCTTCCATGAGCAACAATCAAATACGTGC
TTATGCTGCGATGCAAGCAGGTGAACAACCTGTTCTTCTNATCAANTTGACGCAGGCGATT
ACAAGCCCATCAAGACGAAGTCAAAGTTGAATATTGTGATTATGTCATTGAGATATTTT
AAGTGATTAATAATGATTGGCCGATCATCTACTTATCCTGTAGNCGCAGGTCATGAAATC
ATTGGAACCATCACTGCTCTTTGGTTCATGAAGCGAAAGGACTCAAAG

Sequence 272

CCCTTAGCGTGGTCCGCGGCGAGGTACACCAAGACCAATTGCTAAAATCTTGGATTATGG
AAAATTTAAGTATGAAAGAAAGAAAAACAAAANGTTGAAAAAGAAAAACAATCTTTCAC
AAACAATAGAGAAATTCGTTTATCTTTTGAATCAATTTAAATGATATAAAATCAAAGC
AAAAAAGCCAAAGAATTTTATTAGATAACCGACAGAGTAAAAGTGGCTCTTCGTCTTA
GAGGGCGTGAAAATACAAGACCTGAACAAGGTAAATTAATTTTAAATCTTTTTTGTATG
AAGNAAAATCGATTGCAAAATTAAGTAAAGAANNGCAATCAGTTTGGTAATTTTAAAC
TCTTCATATTGAACGTGATAAGAAAAAATTACCCAAATTTACTTCTTCAAAACAAATAAA
GGAATTAATTGATTTTAAAAAACTATTNAAGGAAGGAAGAACTAATGCCTAANGCCAA
AAACAAAATCGCACTTTAAAAAA

Sequence 273

CCCTTAGCGTGGTCNCGGCCTTTGTACGAAATTATGACTGTTTTAGCTNCAGGAACAGAT
TTAAAAGTAATTGAAGACGTTTTAAATCTGTTTTGATGCTAAGAACATCGAAAAAT
GAAAACTTGAAAGAACAGAGTTAGCATACGAAATTAACAAACAAACAAAGGAATTTT
GTTTTAGCTAACTTAAATCTGAGGAAAGTTTAAATCGAAGAAATTTGTCAGAAGAGTAAAT
ATTCTCAAAAAACAAGTTTTAAGATTTTATGTTATTAATCTAGATTCTGAAAGAGGAATG
CACAAAATTTTCAAGCCTAGAAAAATGATAAACACAAATTTTCTCTTCTAAAAAACCA
ACANCTTCAACAGAAGAAGGTAAAAGTTTTCAAAAACCATTTGTCAAAAACCTTTTGT

TABLE 1
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AAAAAATCAGAAGAAACAGATTCTTCAAAACAAAATGANCAAGACAAAGTGCTAAGAAAA
CCAAAAACTGTAAAAACCAGCAAAAGATCCTAAAGTAGCTCACACAGCAAAAAAAAAAAAA
NAAAAAGTCCTGC

Sequence 274

CCCTTAGCGTGGTCGCGGCCGAGGTACNAAATTATGACTGTTTTAGCTCCAGGAACAGAT
TTAAAAGTAATTGAAGACGTTTTAAATCTGTTTTGATGCTAAGAACATCGAAAAAATT
GAAAAACTTGAAAGAACAGAGTTAGCATACNAAATTAACAAACACAAACAGGAATTTTT
GTTTTAGCTAACTTAAATCTGAGGAAAGTTTAAATCGAAGAATTTGTCAGAAGAGTAAAT
ATTCTCAAAAAACAAGTTTTAAGATTTTTAGTTATTAATCTAGATTCTGAAAGAGGAATG
CACAAAACCTTTCAGACCTAGAAAAATGATAAACACAAATTTTTCTCTTCTAAAAACCA
ACAACTTCAACAGAAGAAGGTAAAAGTTTCAAAAACCATTTGTCAAAAACCTTTTGTT
AAAAAATCAGAAGAAACAGATTCTTCAAAACAAAATGAACAAGGACAAAGTGCTAAGAAA
ACCAAAAAACTGTAAAACCAGCAAAAGATTCTA

Sequence 275

CCCTTAGCGTGGTCGCGGCCGAGGTANTTNCCTGANCAAGTGAAGTGGATGCCAGACCA
ATGGCCAGTGCTAATATCAATGCAATGATCCCAATGACGATGATTGGAAAAAATTTCAAT
GGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATT
TTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGA
TCATTTTCCCCCATGGTGACTATTTTCAAGACCTCTGACATCCGGCTCCGCCTCCACCTCT
ACCTCATAATTCCCAGTCCCAAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCAC
AAGTGTTACTGGCTTCCCATAAACACAAGCCCTTCTCT

Sequence 276

CCCTTTCGAGCGNCCGCCCGGGCAGGTACGCGGGGAAATGCAAAAAATCAAATCAATTT
AATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGATTTAAAGATAT
TTCACCACTTTTAGCAAATGGAGAAAGTGCTAAATTACACAATTAATCAAATGGCTGAGTT
AGCTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTGGGACACC
TACTGCAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATACCAGG
AGACGTTATTAGTTTTGAGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAAAC
TAATATGTTGAAAAAAGGCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGG
AACAAATGAAAGCGATTATTAACCTAATCGAATCTCAAGGTGCTGGTTGNTCATAAAGTAA
TCTTTTACTTGAATTANGATTTTTAAACCGGAATTGAAAAACTTAAAA

Sequence 277

CCCTTTCGAGCGGCCGCCCGGGCAGGTNCTTCTAANGTTAAATCCTGAGGTAAGTCAACC
AAAACAGGATGTGAATATCCTAATAATAATTCTAAAGTCTTATCTTTTAAATGTTGCTCTG
TAACCAACACCTTTGATTTCTAATTTCTTAGAAAATCCTTTANAACTCCGGTTAACATA
CCTTGTAATGATGAATTTGTAGTTCGNGTAATTGNTTAATATTTTTTTCTTCTGATGTT
CTTTTAGTAAGTAGAGTGTTTTCAACTTTTTCAATTGAAATAAATGATGAAAATTCTCTT
GATAATGTTCCCTAATTTACCTTTTATAGNTACTNAAGAATTGTTAATGTTTACTTCAACA
CCTTCTGNTATTTGTAAACACGATTTCCGACACGAGACAATATTAATTATCAAATGTAA
GCAATGGATTTACCACTACATTTTTCCCTTTCTTGCNTTGTATAATTAGGTTNAATAA
ATCCTTT

Sequence 278

CCCTTAGCGTGGTCGCGGCCGAGGTACAAGATAGTNNTCTCAGTAAAAGGTCTATTATCT
AACTTGCCAACTTGTTTACTGAGAGCCCTAAGGAACTAAAAGTCCATAATGCCGTGCA
CAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCTCCCTTCCAGTTCCTCAGC
AGGCCTGGCTGAAGGCCCGAGGAGGGAAGGAAATATAAGANCCAACAATAAAAAATAGCACT
AGCAATAANAAGAATGCCATCCCATGGAGCACACCATAAT

Sequence 279

CCGAGGTACTAACTCTNTTTAATGNNCTAACGTCATATTTTTAAGTTTTTCAATTCCG
TTTAAAAATCCTAATTCAAGTAAAAAGATTACTTTATGAACAACAGCACCTTGAGATTCCG
ATTAAGTTAATAATCGCTTTCATTGTTCCGCCAGTAGCTAAAACATCATCAATAATTGCT

CGTCCGTTNAGGCCGTGTTNCTTACGGCTGGGTTTGAAGAAACCAGCCATTAGAAAGACTGAA
TCAGAACATGGATNAAGTGAACCTNATTCTAAGATGACTCGNNTATCCATGTNGATTAAATC

TABLE 1
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TNCTGGNTCATAATAGGCCTCTTCCCTTTGATTGAAGGGTCACGTNTAAGTATANAAAAC
ATAAACTGTAAGGTAGAGGAAGCGAAGGATAGCTTNGTATTAATGTTGCGTTAAAGCTT
CAGAGACAAGAACAAGAAGCACTCCTCCACGTGACAGCATTTGAATAGGAGGCGGNGGGT
GCNGCAGCCTGGGCAGCTTCAGTCCCATTACAATAAAGTACCTTGNGNGTNATTAGTT
CTAAATGTTTATTTAGAAATGGCATTGATGTT

Sequence 286

GCGTCCGGTCACCGCACTGAACTTCGGGACCAAAAGCTTCCATGCCGCGGNCCCCAGACA
AAGGCAGCTTCCCGCTGGACCACTTCGGTGAATGTAAAAGCTTTAAAGAAAAATTCATGA
GGTGTCTCCGTGACAAGAACTATGAAAATGCTTTGTGCAGAAATGAATCTAAAGAAGTAT
TTAATGTGCAGGATGCAAAGGCAGCTGATGGCACCAGGAGCCGCTAGAGAAGCTCGGCTTT
AGAGACCTAATGGAAGGGAAGCCAGAGGCAAAGGATGAATGTTGAGAAGGGAGCCACAGG
ACCTTGTCCTCCAGCCTGGAGCAGAGCTGAGCCCTTCTGCCACAGNGCAGGGGGACCTGA
CACTCAGCCCGTGCTGGCCCGTGACAGGGGCTCTCCCTGGG

Sequence 287

CGTCCGGTGCACTGCAACTTNTATATNTAACCCTAACTCCAATAAAACAAATTCAGGG
AAAACCAAGGGGTGAATGGGATGTGCGTGTTTATCAGGAGTGTGCTCTCACGTGGATGCT
GAATGATGGAGGACAGCGGACTGCATAAGCCAGAAACCTGTACGGGTGCTGGCTGTGGAA
AGACGTGTCTGTCTCTATCTATGTACAATAGTTNATTCTGTGAGGCTGAAAAAGTATGGT
CTTTAGGACCTTGCCCCCTCTAACTATAGAACTTAAACAGTGTACTGCTATTAGATATAT
CTGATATTAATAGAACATGCCAAGTGCAGGTCCCAATGCGTATTTGTGAAGCACACATC
TGAGTAAATGGCTTAGATGGAAAGCAAGTCATCATGAGTAAAAATTAAGCCTCAAACCTG
CCGGTGCTCCTCACCTCTTTGTACCCAGGTAAAGGTCACACTGTGTGTTGCTTTTGNTGT
CTTCTCTTCCTAACCTAG

Sequence 288

CNCGCGTCCGGGGCTTGTTTACTATGGCCGATGATCTGGAGCAGCAGCCTCAAGGCTGGC
TGAGTAGCTGGCTGCCACGTGGCGCCCCACTTCCATGTCTCAGCTGAAGAATGNNGAAG
CTAGGATCCTCCAGTGTCTCCAGAATAAGTTCCCTGGCCAGATATGTGTCCCTCCCAACC
AGAATAAAGATCTGGACGGTGACTGTGAGCCCCGAGCAAAAGGACCCGACCCCCCTGGTG
ATGGTGACGGTTTTGGGGGCGGCGTGGGCCTCTGGATCCTCAACATGGACTCACTGAGT
GCCCGCCGCACACTGCACACCTTCGATCTGCTTGGNNTTGGGCGAAGCTCAAGGCCAGCA
TTCCCGAGGGACCCGGAGGGGGCTGAGGATGAGTTTG

Sequence 289

NGGAAAGCCGGCATAAGTGACATNGTTTGGGCAGTTGCCNGCTGGACTGAAGGGGCNAACC
CANACCACCTTAAGCCATAAAAGCCCGTGACACTGCTANCNAAGGTGCCTTGCCACCCGC
TTTGCCACCNGTCCCGGAAATGNAAAAAAGTCGCGTGCCNTAAAAAAGCTGCCGGAAGG
NCCTGGGTGNACNTTTGGGCCACCCCCACCCCGCTGGCAAGGNCTTGAATTGNGTNACNC
CAAAAGACGCCANGCCGGACCTTGGNAAANNATTGTTNTTTNGGGANAAAAAAAATG
GANCCCGNTGGGGGAGGCCCTTGGGGGCATTGNGNAAGCCCCCGGAGGGTTCCCGNTGT
TGGCNGGGGTCAAATTCAAAGGCCAGTGGTNGGCCACCCCGGGGAACCTGGNNGCTGTTG
CAAGNACCNNGGTGGGGAACCGTTTCAAGGAATACCCCAACCAACCCANGTAGCCACCTT
AAGGTAATTTGGCCACCTTGCCACCANAANGNGCCATTGGGGAAGAAACCACCAAAAA
CGTCCCCCGGGT

Sequence 290

CCCCGCGCTCAGTATGACTCTTTAGTCCCAGTTTTTCATGGGTAGTCTCTAAATTCTTTAC
CTTTATGTGATTGTGAGTTGGGAGGTGGTGGGCATCATCTTAGTCCATTTACCTTTTTCA
GTTTTGTAATTATCGTCTTCATCTACTACCTTTATATAATAAAGGGAAGGGGTCTTCC
TTTACAAATAGTTTTATCATCCTTCTCTTTTGTATGTCTATATCTTATTTTTGAGGA
GAATATATGTTGTATAGACCTACACGTGGGTGGAAGAAGAGTCATGTATGTGTGATTGTG
TGAGATCCAGAATGTTGGAACCTTTAATTTCTTATTTTGTACTTATAATTACCTGCTGGA
ATACCTGGTTGCATTCTGTATATTGTACCCTCATTTAAAGTTTCATGGAGGCAAAATAAC
TCTGTTGCACATAAGGCCGGGGCTTATGCATGTCTATCGGATGTGGGCTCAGATCACGG

TABLE 1
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AAGACCCGAA

Sequence 291

TCTTGCAGACTCAAGCTCCGCGCGCAGCCGCTCCTGGTGCGGGCCCACAGCAGCCTGGGC
CCCGGNTCGGCCCCCGAGCCCCCTGGCCTGCGACGACTGTTCCCTTCGATCGGCCAAATC
CTCCTTCAGCCTCCTGGCGCCCATCCGCAGCAAGGACGTTGCGAGCAGGAGTTACCTGGA
GGGCAGCCTNCTGGCCAGNGGGGCCCTGCTGGGGGCGAGACGAGCTGGCCCGCTACTTCCC
AGACCGGTACGTGGCGCTCTTCGNGGCCACCTGGAACATGCAGGGCCAGAA

Sequence 292

NGGCCCCGCCGGGCAGGTAATAACTTTAATTAATGAGCTAACGTCATATTTTTTAAGTT
TTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAAGATTACTTTATGAACAACAGCAC
CTTGAGATTGATTAAGTTAATAATCGCTTTCATTGTTCCGCCCAGNTAGCTAAAACATC
ATCAATAATTGCTACTTTTTGGCCTTTTTCAACATATTAAGTTTGGATTTCTAGAGTTG
ATTTACCATATTCTAAATCACTCAAACTAATAACGTCTCCTGGTAATTTTTTAGGTT
TTCTTACCATAATAAAAGGTTTTTTTTAAAAAGCCTGCAGTAAGGTGGTCCCAAACAAGA
AAACCCTCTTTGCGTCTGGGACCTATAATAACCATCTGCATCTTAGCTAACTCAAGCCC
ATTTGATTAATTGGNGTAATTTAGCACTTCTCCATTTGCTAAAAGGTGGTGAAATAATCT
TTAAAATACAATCCCTTCAAATTGGGGAAATCTTTTAAACATCCCCCGGCGGTACCTCGG
GCCCCGTTCTAGAACTAGTGGGATCCCCCGGGCCTG

Sequence 293

GCTCCCCGCGGTGGCGGCCCGCCGGGCTGGTACGCGGGGAAATGCAAAAATCAAATCAA
TTTAATACGAATACATCATGAGATGTTAAAGATTTCCCAATTGAAGGGATTGNNTTTAAA
GATATTTCAACCACTTTTAGCANATGGAGAAGTGCTAAATTACACAATTAATCAAGTGGCT
GAGTTAGCTAAAGATGCAGATGTTATTATAGGGCCAGACGCCAAGAGGTTTCTTGTTTG
GACACCTACTGCAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATT
ACCAGGAGACGTTATTAGTTTTGAGTATGATTTAGAATATGGTAAATCAACTCTAGAAAT
CCAACTAATATGTTGAAAAAAGGCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTAC
TGGCGGACAATGAAAG

Sequence 294

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACAATTTCTAATTG
ATCCTGTTACATTGAGTGAATGGCATTGCATATTTATATGTTGCTTACAGCTTATTGA
TTTAGGTAATATTGTGCTTCTTCACTATCTGACCTGAAAAGCACTCTCTTCTCTATG
CACTCTTATATTCTGCCTTTCTGCCTGGAGTTTGAAATACATGTCTCTTTAGTTTCTTTT
GCACATGCTACATTGTGCTTTAGACCGGGAGATAATACAGGNGCCTTACCTTACAAATTN
ATNTTTNTGGCAACNCNAATTNTNTNGAAATTTTNNTTTAATTTNAAAAACCCCAACCAA
TTTTCCNNCNCNAAAAATTTTTTTTTGGGAAAAATTAANTTCTTTAAANNNAACCCCCCN
AAAAATTATNGGNGNNAAAAAGGNGCCCCNTTTTGGGCCCTTTTTTTTTTTCNCGGGNG
GGGNAAAAATTTNAAAAAANTTTTTTTGGGNCCCCGGGAGAAAAANNTCCCTNTT
TTTTTTTCNCGGGTTTTAAAAANGGGGGGNAAAAATNTTNTTGGCCCCCCCCNTTTT

Sequence 295

TATAGGGCGAATTGGAGCTCCCCGCGCGNGGTCCCAAATGGAAGTGTGAAAACCAANGGCC
CATCCCCCNNTTTNTAGAGGGGTGGTAAAAAATAAACCCANANATCAAGGGGAGAAAGG
AAAAGGATGAAAGGACAACTGCCAAAAAATTTNCCCAAAGTGGCGACTTTTTTAANTN
TGGGAGCCAGAATTCTGAGGGCTTTGCATTGTCTTGCAATTCNCTCAAGGAGCCTGAAA
TTGAAAAAAAATGCCAACAAGGCCAAATNACTACTTTTTAGGAGGGGGTTTTGGAGGTC
TTGGGAAGCCTCATTCCCNNTCAACCNNTCNAATTCTGGGAATGGGGGAAATGGAAAGAA
TAGAAGATGTTGGGTGCCCACTAGGCTACTGNTTAAAAGGGGAAGCTTGAAAANTTNT
NCACCAAGGTTGGGTATTCAAAAATATTGTAATGGACTGGGTATTGGCAAAAAGG

Sequence 296

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACAGGTGGGTCCCTTTTCAGAGGT
TGGGCCTTCTAGACCTCACCTGTTCTCACTNCCCTGGTTTAAATTCAACCCCAAGCCATG

TABLE 1

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GCCAATGGCCAAATAATAGAAATTGGTTCCTACCCAGCTGGACCAGGGGAGGGAGGTCT
TGTGCAGTTTCTTGACCACTTTGTTGGTTGGACCATNGGCTTAAATACCAATGGGGTATT
CGGCTTGAGACCTAAAGTTTGTAAGAAAATTNAACCAAAATGGTGCCTGCTTGGGTAAA
AATGGGCTACCACCTCAATCTGGACTTCAATTCTTTAATTCTAATTTTAAGTTTGGGT
TTGGTATTCTTTGGCCTAAAGGTGGCGGTAGTCCCAACCTCTTTGGGTANTTACCCCTTC
CTAAATAGGTCAATACCTAGGTAGGTCAATACCTCCCTGGGTGGTAAGGNGGTATTTCTT
CTTAAAAAAGCCTTTTAAAA

Sequence 297

CCGCGGTGGCGGCCGCCCGGGCAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACT
CCTACGGGAGGCAGCAGTAAGGNNTTTTCCACAATGAGCGAAAGCTTGATGGAGCGACAC
AGCGTGCAGGATGAAGTTCTTCGGAATGTAACTGCTGTTATAAGGGAAAAAAAAAAAAA
AATAANNAAAAAAAAANGGTACCT

Sequence 298

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGNCAGGTACGCGGNGAAATGCA
AAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGG
GGTTGTATTTAAAGATATTTCAACACTTTTAGCAAATGGAGAAGTGCTAAATTACACAAT
TAATCAAATGGCTGAGTTAGCTAAAGATGCANATGTTATTATAGGTCCAGACGCAAGAGG
TTTCTTGTTTGGGACACCTACTGCAGCTNTTTTAAAAAACCTTTTATTATGGTAAGAAA
ACCTAAAAAATTACNAGGAGACGTTATTAGTTTNGAGTATGATTTAGAATATGGTAAATC
AACTCTAGAAATCCAACTAATATTTTGA AAAAAG

Sequence 299

CCGGGCAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACTCCTACGGGAGGCAGCA
GTAAGGAATTTTCCACAATGAGCGAAAGCTTGATGGAGCGACACAGCGTGCAGGATGAAG
TTCTTCGGAATGTAACTGCTGTTATAAGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GTACCT

Sequence 300

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTCTAGGACAATCAGGAAG
TAATCTTAAAAAATAATTGAAGATGTTAAAAATACGTTAAAAATAAAAACTTGTTTT
AAACATAGATGCAGTAGAAATTGAAAAACCAGATTTAGATGCAAAATTATTAGCTGAATC
AATTGCAATTAATTTAGAAAACCGTGGATCATACCGTATGGCACAAAAATTTGCAATTCG
TTTAGCACAAAAAGCCGGAGCTAAAGGTATTA AAACTAAAGTTAGTGGTCGTTTAAATGG
TGTTGATATGGCTAGATCAGAAGGATATTCTGAAGGTGAAATGAAATTACACACACTTAG
ACAAGATGTTAGTTATGCAACAGCAACAGCAAGAACAACCTTATGGAGCACTTGGAGTTAA
AGTTTGAGTTTCATTAGGCGAAGTATTT

Sequence 301

CCGGCCAGGTACGCGGGGAAATGCAAAAAAATCAAATCANGNTAATAGAATACATCAGAG
ATGTTAAAGATTTCCCAATTGAAGGGATTGNATTTAAAGATATTTCAACACTTTTAGCAA
ATGGAGAAGTGCTAAATNACACAATTAATCAAATGGCTGAGTTAGCTAAAGATGCAGATG
TTATTATAGGTCCAGACGCAAGAGGTTTCTTGTTTGGGACACCTACTGCAGCTTTTTTAA
AAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGANACGTTATTAGTTNG
AGTATGATTTACAATATGGTAAATCAACTCTAGAAATCCAACTAATATGTTGAAAAAAG
GCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGGAACAATGAAAGCGATTA
TTAACTTAATCGAATCTCAAGGTGCTGNTGTTTATAAAGNAATCTTTTACTTGAATTAG
GATTTTAAACGGNATTNAAAAACTTAAAAAATATGACCGTTAGCTCATTAAATAAAAG
TTTAGTACCTCGGCCCGCTCTAG

Sequence 302

AGGTACTTTGATATCTNCGCCCTCTCGTGTGTTCTTGTTGGNGNTAACCAGAGGCAAGAT
GCCCGAGGAACCTTCATGTGTATGTCTACCAGGATTTAGATGATCTCTAATAATGGAGGA
CCTGCTATTATTTGTA AAAAGTGCCAGAAAACATGAAAGGTGTTACAGAAGATGGCTGG
AACTGCATTTCTTGCCCTAGTGACTTAACTGCCGAAGGAAAAATGTCACTGTCCATTGGC
CATATTTAGTGGAAGAGACATTNATGGAACATTGNTGNCTCAAGCAACTNGNGAGCTC

TABLE 1

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TGNGATGGAAATGAAACTCTTTTATGGTAGTAAATGCTTTAGGAGACAGGNGCGTNOGA
TGTGAGCCAAACATTTGNTAATACCAGCAGGTCCTGTGCATGTTNCGAACCTAACATTTTA
ACAGGGGGATTATGTTTCAGNAGCACAGGGAATTTTTCCTTGACGTANAATTTACCTG
CACGTTATGGAGAAGTTTGGCAT

Sequence 303

CCGGGCAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTTAATAGAATACATCAGAG
ATGTTAAAGATTTCCCAATTGAAGGGATTGATTTAAAGATATTTCACTACTTTTAGCAA
ATGGAGAAGTGCTAAATTACACAATTAATCAAATGGCTGAGTTAGCTAAAGATGCAGATG
TTATTATAGGTCCAGACGCAAGAGGTTTCTTGTGTTGGGACACCTACTGCAGCTTTTTTAA
AAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAGACGTTATTAGTTTTG
AGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAACTAATATGTTGAAAAAAG
GCCAAAAAGTAGCAATTATTGATGATGTTTTAGCTACTGGCGGAACAATGAAAGCGATTA
TTAACTTAATCGAATCTCAAGGTGCTGTTGTTTCATAAAGTAATCTTTTTACTTGAATTAG
GATTTTTAAACGGAATTGAAAAACTTAAAAAATATGACGTTAGCTCATTAAATTAAGTTT
AGTACCTCGGCCGCTCTA

Sequence 304

GCGGTGGCGGCCGAGGTACCTTNTCCGAATGCACCTTNAAAGCGGGTATTAGCCTATACA
GGCTGTTTTAGTCGAATGCAGACCATCAAGGAAATTCNNGAATATCTATCTCAAAGACTG
CGCATTAAAGAGGAAGATATGCGCCTGNGGCTANTCCANAAGTGGAGAANTACCTTACTC
TTTCTGGGNTGATGAGGAATCATAAATCTGGAATATTTNGAAAAATCCAGGATGAACAACA
C

Sequence 305

GCNNGCGCGGGGAAATGCAAAAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTA
AAGATTTCCCAATTGNNGGGATTGATTTAAAGATATTTCACTACTTTTAGCAAATGGAG
AAGTGCTAAATTACACAATTAATCAAATGGCTGAGTTNAGCTAAAGATGCAGATGTTATT
ATAGGTCCAGACGCAANGAGGTTTCTTGTGTTGGGACACCTACTGCAGCTTTTTTAAAAA
ACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAGACGTTATTAGTTTTGAGTA
TGATTTAGAATATGGTAAATCAACTCTAGAAATCCAACTAATATGTTGAAAAAAGGCCA
AAAAGTAGCAATTATTGATGATGTTTTAAGCTACTGGCGGAACAATGAAAGCCGATTATT
AACTTAATCGAATCTCAAGGNGCTGGTGNTCATAAAGTAATCTTTTTTACTTGGAATTAG
GGATTTTTNAACCGGAAATTGAAAAA

Sequence 306

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTACGCGGGGCAATTA
TGAAATTATTGCAGAAAGAAGATTCACCTCTCACCTGATGAATAAGTGTTATAGGTNAAG
GCTACAAAATACTAATTTGTTATTATTTTAATAATAATTTTTGTTTTGCTGAGAAAGTG
GATTTACCACTTTTTTATTTTTTAATCCAAGGAGGAAAAATTATTTCCAAACCAATCCT
AAAAATTTTTCACGTTCTAAACCAGTTCAAGAACATTGAGTAAACAGAAATATTCCATT
GTCAAAGTTTTTCTTATCGGCTCAGATAATGAAAAAATTGGGATAATTGAAACAAGAGAA
GCTATTGAAATGGCAAAAAGAACAAAA

Sequence 307

CGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGCAGCAAGCGGACGTGAGC
GATAATGGCGGATATGGAGGATCTCTTCGGGAGCGACGCCGACNGCGAAGCTGAGCGTAA
AGATTCTGATTCTGGATCTGACTCAGATTCTGATCAAGAGAATGCTGCCTCTGGCAGTAA
TGCCTCTGGAAGTGAAAGTGATCAGGATGAAAGAGGTGATTCAGGACAACCAAGTAATAA
GGAAGTGTGTTGGAGATGACAGTGAGGACGAGGGAGCTTCACATCATAGTGGTAGTGATAA
TCACTCTGAAAGATCAGACAATAGATCAGAAGCTTCTGAGCGTTCTGACCATGAGGACAA
TGACCCCTCAGATGTAGATCAGCACAGTGGATCAGAAGCCCTA

Sequence 308

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATGTTATTAATGTGACTGACA
AGTAATTAGAAAAGTGGAAATTAATTTTACAAACATTTTTAAATCGCTNCAATTAATAA
AAATTCAGATGGTTACATTATGAATATGAATGAAATGTCATTAGCGACTTCGTTAAATG

TABLE 1
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TATATGTAATTCTATATTTTCCCCAAAACCCACATTTTATGAAGAATATTTATTTATTTA
TTTATTTTGTGTTTTGAGATGGAGTCTCGCTCTGTTGCCAGACTGGAGTGCAATGGTGC
GATCTCCGCTCACTGCAACCTCCACCTCCTGGGTTCAAACGATTCTCCTGCCTCAGCCTC
CCGAGNAGCTGGGACTACAGGCACCGNCACCACGCCCGGCTAATT

Sequence 309

CCGCGGTGGCGGCCGCCGGGCAGGTAAGTACCCTCCTTGATGGTTTACTTTGCAAGCTA
TGGTGACCTCCGCAAGTTGTGTCTGGGCCCATCCAGGGCTCTGACTAATTGTATTCAAAT
CAAGGCAGGAGCGGGCCAGCTGGCGTTGACTTAACCAAGCCATTTTATAAGCCTCCCGAT
CATTTTTAAGCCACTCTAAGTCGTGTAGTAGGATCTGGTCAGAGTTATGTATACTCTGAT
GGGCATGTGCTGTGTCTGTCTAAAATGTCCAGAAGTTCTGAAACACTTTTAGATCTTCCAG
AATTTCTTGAGGAAGTCTGCCTAAGTAAGTATGCACATCAAGTTCATCACCGGAGGAAT
CAAAAGAATTTCCATTTTCTATTTCTCTACAGAAAAGAAAAGGATCTTCCTTTAAGATGG
AAATATTATTTCTCTTC

Sequence 310

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCACTTGAATTATCTA
TTGAAAGAACTACTACATCGAGTTTTTGTCTTTGCCATTTCAATAGCTTCTNTTGGNN
NAATTATCCCAATTTTTTCAATTATCTGAGCCGATAAGAAAACTTTGACAAATGGAATAT
TTCTGTTTACTCAATGTTCTTGAAGTGGTTTGAACGTGAAAAATTTTAGGATTTGGTT
TGGAATAATTTTCTCCTTGGATTAATAAATAAAGTGGTAAATCCACTTTCTCAG
CAAAACAAAATTTATTTAAATAAATAAATAAAGTATTTTGTAGCCTTTACCTATG
AACACTTATTCATCAGGTGAGAGTGAATCTTCTTCTGCAATAATTTCTAATTGCCCGN
GTACCTGCCCGGCCGC

Sequence 311

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGNCAAGGTACCTGACTGTGGC
TCANATCTGCGTCGACGAGCAGAGAAGAAATCACTCCATATCCGATGAGAGGAAGGGT
GGCAGAGANATGGTGTCTACAATTAGAGACATTTCTGACTCCACCTTAGCCTAAGCAAAC
TTTATATACTGAGTAACATTTGAAGGTTGTCTTTAATGGTGGGGGTGNTTTTCTTT
TTAAACTACAGT

Sequence 312

CCAAAANGGNCCTGGGGCGTGGTCACGGCCNAGGTACAAAATTATGACTGTTTTAGCTC
CAGGAACAGATTTAAAAGTAATTGAAGACGTTTTAAATCTGTTTTGATGCTAAGAACA
TCGAAAAAATTGAAAACTTGAAAGAACAGAGTTAGCATACGAAATTAANNAGCACAAA
CAAGGAATTTTTGTTTTAGCTAACTTAAATCTGAGGAAAGTTAATCGAAGAATTTGTC
AGAAGAGTAAATATTCTCAAAAAACAAGTTTTAAGATTTTAGTTATTAATCTAGATTCT
GAAAGAGGAATGCACAAAATTTAGACCTAGAAAAATGATAAACACAAATTTTCTCT
TCTAAAAAACCA

Sequence 313

AATNGGGCCTNGCGTGGTCACGCCCAGGTACNAAATTATGACTGTTTTAGCTCCAGGAAC
AGATTAAAAGTATTGAGCNTTTTAACTNTTTTATCTAAGACATCGAAAATTGAAAACT
TGAAAGACAGAGTTAGCATACNAAATTAANGCACAACAGGATTTTTGTTTTACTAACT
TAAATCTGGGGAAGTTAATCNAAGATTTGTCAGAAGAGTAAATATTCTCAAAAAACAAG
TTTTAAGATTTTAGTTAATCTAGATTCTGAAAGAGGATTGCNCAAACTTTAGAC
CTAGAAAAATTGATAAACACAAATTTTCTNTTTTAAAAA

Sequence 314

NGGGCCTNGGNGTGGNNACGANCCAGGTACTTTTACCAAAGAATCTACTAGAACTCTCTG
CTATTCAAAAACAAAGAGCTCATACTTGTGGAGTAGGGAAAAAATTAGAAATTTGACCAA
AAGATAGATTCAATCAACTACAAAGTCAATTCAGATGCTGNTAACATCGAACTCTTG
AAAAAGAACTATTANAATCTGGAGTTGAAGTTAATGGATCATATACCTGNTTTGCTTGA
TCAAGCGGATTGNTCAGCTTAATATTAAGAAGATGGNATCTATTTAGATCTTACTTTAG
GACGNGGNGGNCATTCGAGNCAAAATTTAAAAAACTTACTA

Sequence 315

TABLE 1

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CCCTTTGAGCGGCCGCCGCGGGCAGGTACTTGTCCATAATTTGTGAATATATTAACAAAT
TTTTCTTTGAGTATTCATTTACTAACTCATAAGCTGAAAAGCTTTGAGCTTGATTCAAT
CTCATATCCAAACGAGCTTGTTGTTGTATGAAAATCCTCTATTGGCTTGATCTAACTGA
GGTGAAGATACTCCTAAATCAAGTAATACACCATCTACTTTGTTGATTTGAAGTTTTTT
AGTCTTGATCAAAATCTTTAAATCAGATCAAATAAATTCAATATTTGAAGAAATTTT
AAGAGTTTTTCTTTGTTGTTCAATTGCTTGTGTTCTTTATCAAAGACTA

Sequence 316

CCCTTAGCGTGGTCGCGGCCGAGGTACAGGAACTGCCAAAGGCAACAGAAATCTTTCTC
CCTATGTCCCAGCCTACCCCCACTTTACCGAGGCCAACAGCCGCCTCAGAAACCAGATTC
AGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGGCCAGGGAAGGAGA
TCAAGGTAGTCAAGCGGGGGTCTGCTCAGATCTGGTTGTGCTCGAGCTATGCAATGCCT
CTCATGGAGATGTGAGGACCTATCTATTATGATGACCAGGGCCACATCCGGAGGGGGCAA
CAGACTTTCATCTATCAGCCCTTTTCAACCACTGATCTACTAACTGGAAACACTCTGAA

Sequence 317

NGGGCCTTGNGAGCGGCCGCCGCGGGCAGGTACGCGGGGGTTTAAAAAATATTTAAAAA
ATGGAGGAATTATGAACTTAAAAAGCAAATTAAGAAGCTTTTAGGTGCTACTGCACCTG
TGTTGCCAGTAGCATTTTTGCTTCTTGCCAAACAAGATTTGNNNAAGTAAATGACCATA
AATTAGTGATTGCTCACACTTTTAATAGTAGAGAAGGAAGGTTTTTAGCATTAGATCAAA
TTGTTAAGCTTTGAAATGAAAGTAAAAAGTTAAAAACAAAGAAGAAGGATTTTATCCAA
TAACACTAAATCGACAATTTGCGCAAACTTATGCAGAA

Sequence 318

CAGGTACTTTAGCTCCAAAATCAGTTTGATGAGATACAGTTGCCCTATATGAGAATGCA
CAGGATTCCTCATTGGTGAGTTCAACCATACATTTTGGGTAACCTCCTGAAGACATCTGCA
AATTGTGAGTTAGTTGGTGGGGTCCATTAACTTTGCATATGTTATTCTTTCTACTGAAG
TGTGTGAGGCCACAACCTGCCCATTATGCATATCANAAACAGAAATTTGTTGAGGATAAT
TTTGATATTACAGAGNGGCTGNGAAACTGGATTTGAATTACCGGGATACATGCATGCTT
CTTGGTT

Sequence 319

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGGGCAATACGTAGAGATAATAACAGTTTTT
TAAAAAATTAATATTTGTTATTGAATGTATATTTTGAAGTATTGCATCTTTCTATACT
AATAAGGAGGTGTAATTTGAACGCTTTTAGAAAGAAAAAGAAGAAATTAGTGCAAGAAAT
TAAAGATTTGATTAATTCTTCTTCTTATTAGTTATAGCTGAATATCGTGGATTAACAGT
TGCTGAAATTGAAACTCTTAGAAATGAAGCTTAAAGAAGCAGGTGTTTTGTAAAAGTTT
ATAAAAATAGACTATTTAAATAGCATCTAAAGAAGCAGGTTCGGAGATTTAGAACAAT
CACTAGTTGGTCCAAATTTTTTGTCTTTGGTTCTACAGATGCANTAGCTCCAGCTAAAA
TTATTTCAAATTCGCTAAAAACAAATCCAGTAAGTTGTATTTAAAGGCGGTATTTTTTG
A

Sequence 320

CCCTTAGCGTGGTCGCGGCCGAGGTACCACGGAATTTTAAAAATAGACTNTAAAAAACCN
TCAATTGCANAACAAATTTGNTTGATTTACTTCAAATTGAAGGAACCTTTTAGGTTTT
GTTGNAATAGTAAANGAAATTCGATNAGTAATTCAATCAAAGAATAATGAATNGACAAAT
TCTGACATAAAAAACAGCCAAAGAATATCATTTAGAACAATAANAGCGCTTAAAAAACT
TCAAATTAACAAATATAATTTATAATTTATGGCACTATGAAAAAAAAGNGACTTTATTTA
ATATCAACTTTANCATTTTCAACAATTTTATTAGCTATTNCTNGTGGTAAAAATCAAAT
ACTCCTGTAGGCACACAACCANTTGATANTCCAAGCCTGGAGGATTCATCAAGNGAATCA
ANAGTTCTGGATTTAAATTAATAGAAAAAAG

Sequence 321

CCCTTAGCGTGGTCGCGGCCGAGGTACAATTTCTAATTGATCCTGTTACATTCAAGTAA
ATGGCATTGCATATTTATATGTTGCTTACAGCTTATTGATTTAGGTAACATTTGTGCTT
CCTTCACTATCTGACCTGAAAAGCACTCTCTTCTCTATGCACTCTTATATTCTGCCTTC

TABLE 1

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TGCCTGGAGTTTGAAATACATGTCTCTTTAGTTTCTTTTGCACATGCTACATTGTGCTTT
AGACCGGAGATAATACAGTGACTTTACCTCACAAATCATATTCTGTCAACACAAATCTAT
GAATTTAGTTTATTTAAAATCAGAACAATTTCTACAAAATTTTTCTGGAAAATAGACTC
CTAACAGACCTACCAGAATCATGCTTAAAGGGCTCCCTTGACACTTATTCTATACTGAAG
GATAAATTTTAAAAAAT

Sequence 322

CCCTTTGAGCGGCCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTAGTTAA
ATATAAATTTATTTATTAACCTTTTCAATACCTTTTGAAGGTCAAAGTTTGTAGATGAA
TTAGGTTCTTTTAAAAGTAAATCCCACAAGTGAAGTGCAGCTAGAATAATAAATACTG
CATATGCAGCTTCTGTTGATGCTGATTTAATTCCTGCAACTAGAACAGTTGCTATAGAAT
AAAATGCATAACCTAATCCTCANATAAGTCCAAATTGATATCCAACCTTTTTAGGATTTG
ATCCTTTGTATTGCGGAGGAAGATTTAAGATAACACCTTGAATTCCTCAAAGCATTACTC
CCATTAAAAATCCTAAAATATAGAATAATCAAGTTCATTACCTA

Sequence 323

GCGGTGGCGGCCCGCCCGGGCAGGTACAAGGTAAAGCAAGAGCTGGCTCTCTACGTTACCC
AATTTTTGTAGGTGGTGGTTCGTGCATTTGGGCCTACAAATAATAAAAATTACAAAATTAA
ATTAAACAAAAAAGTTGCAAAATTAGCTTTTGCCTCAGCTTTTAAGTCAACTTGCTCAAA
ATAATCAAGTACCT

Sequence 324

NNCTTAGCGTGGTCGCGGCCGAGGTACGCGGGGAAATGCAAAAAATCAAATCAATTTAA
TAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATATTT
CACCCTTTTAGCAAATGGAGAAGTGCTAAATTACACAATTANNCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTGTTTGGGACACCTA
CTGNAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAAACCTAAAAAATTACCAGGAG
ACGTTATTAGTTTTGAGTATGATTTAG

Sequence 325

CCCTTTGAGCGGCCCGCCCGGGCAGGTACTTGTCCATAATTTGTGAATATATTAACCTAAT
TTTTCTTTTGAAGTATTCATTTACTAACTCATAAGCTGAAAAGCTTTGAGCTTGATTCATT
CTCATATCCAAACGAGCTTGTTTGTGTATGAAAATCCTCTATTGGCTTGATCTAACTGA
GGTGAAGATACTCCTAAATCAAGTAATACACCATCTACTTTGTTGATTTGAAGTTTTTT
AGTTCTTGATCAAAATCTTTAAATCAGATCAAAATAAATCAATATTTGAAGAAATTTTT
AAGAGTTTTTCTTTTGTGTTCAATTGCTTGTGTTTATCAAAGACTA

Sequence 326

CCCTTAGCGTGGTCGCGGCCGAGGTACAGGAACTGCCAAAGGCAACAGAAATCTTTCTC
CCTATGTCCCAGCCTACCCCACTTTACCGAGGCCAACAGCCGCTCAGAAACCAGATTC
AGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGGCCAGGGAAGGAGA
TCAAGGTAGTCAAGCGGGGGTCTGCTCAGATCTGGTTGTGCTCGAGCTATGCAATGCCT
CTCATGGAGATGTGAGGACCTATCTATTATGATGACCAGGGCCACATCCGGAGGGGGCAA
CAGACTTTCATCTATCAGCCCTTTCAACCACTGATCTACTAACTGGAAACACTCTGAA

Sequence 327

NGGGCCTTGNAGCGGCCCGCCCGGGCAGGTACGCGGGGGTTTAAAAAATATTTAAAAA
ATGGAGGAATTATGAACCTAAAAAGCAAATTAAGAAGCTTTTGGTGTACTGCACTTG
TGTTGCCAGTAGCATTTTTGCTTCTTGCCAAACAAGATTTGNNNAAGTAAATGACCATA
AATTAGTGATTGCTCACACTTTAATAGTAGAGAAGGAAGGTTTTTAGCATTAGATCAAA
TTGTTAAGCTTTGAAATGAAAGTAAAAAGTTAAAAACAAAGAAGAAGGATTTATCCAA
TAACACTAAATCGACAATTTGCGCAAACTTATGCAGAA

Sequence 328

CAGGTACTTTAGCTCCAAAATCAGTTTGATGAGATACAGTTGCCCTATATGAGAATGCA
CAGGATTCCTCATTGGTGAGTTCAACCATACATTTTGGGTAACTCCTGAAGACATCTGCA
AATTGTGAGTTAGTTGGTGGGGTCCATTAACTTTGCATATGTTATTCTTTCTACTGAAG

TABLE 1
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TGTGTGAGGCCACAACGTGCCATTATGCATATCANAAACAGAAATTTGTTGAGGATAAT
TTTGGATATTCAGCAGNGGCTGNGAACTGGATTTGAATTACCGGATACATGCATGCTT
CTTGGTT

Sequence 329

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAACTTTAATTAATGAGC
TAACGTCATATTTTTAAGTTTTTCAATTCGTTTAAAAATCCTAATTCAGTAAAAAGA
TTACTTTATGAACAACAGCACCTTGAGATTGATTAAGTTAATAATCGCTTTCATTGTTC
CGCCAGTAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTCAACATATTAG
TTTGGATTTCTAGAGTTGATTACCATTCTAAATCATACTCAAACTAATAACGTCTC
CTGGTAATTTTTAGGTTTTCTTACCATAATAAAAAGGGTTTTTTAAAAAGCTTGCAG
TTAGGGTGGTCCCAAACAA

Sequence 330

CCGCGGTGGCGGCCGCCCGGGCAGGTACACCTCTGATTCTCACTAGTTGAATGCAAGAAC
TTGAAAGGTTTCAGGTAAGTGTTTTGAAAAATTTGACTTTCCAACTTTTGCCACTTGCT
ATCTGAAACTCAGGAATCAAAAAATACCGACAGGCACTGTTACTTTCAAAATCTTTCTA
TAAGTTGAGAATGGGACAGATTTGCAGAGCAAGGGAACTTGAACAGTTACTTCTAGTGG
TAGGAAATGAGGTGGCTAGGATATTACCCAGCTGGTGGGTGACTTGGGCAGTGTGTTCTT
GCTTTCAGTGGTTAGCCTTTAGCAAATCTGCTTTAGAGTGAGAGTAGAGGGCAGGCTGTT
GTATTACAGTGCTCTTGTTTTTGAAAAATTAATCACTCTACTGNTATTTTGTCTCCTT
GGGTAAAGNGNTATTTAATTTTTCT

Sequence 331

ATTATTGCNGAAAGAAGATTCACCTCTCACCTGNTGAATAACGTGTTTCATAGGTAAAGGCT
ACAAAATACTAATTTGTTATTATTTTAATAATAATTTTGTGTTGCTGANAAAGTGGAT
TTACCACTTTTTATTTTTAATCCAAGGAGGAAAAATTTTCCAACCAATCCTAAAA
ATTTTTCACGTTCTAAACCAGTTCAAGAACATTGAGTAAACAGAAATATTCCATTTGTCA
AAGTTTTCTTATCGGCTCAGATAATGAAAAAATNNGGGGATA

Sequence 332

CCGCGGTGGCGGCCGCCCGGCCAAGGTACGCGGGGGCAGAAGAGGAAGATTTCTGAAGAG
TGCAGCTGCCTGAACCGAGCCCTGCCGAACAGCTGAGAATTGCACTGCAACCATGAGGTA
AATATTTTCCCTTCGTATTCGGTAGTGCTGTTGAGTCATCTTGCCAATGCAAATCCTGA
GAAGCTATGTTCCCAAAGAGGGCCAGCTCCATTTAGTGTTTGTATAGCCTTACTATGC
CTCTACCTCTGGGGGTTGTAAATCTGTTNTACCCAATGGGNGGGTTTGTNNCCCTTCCTG
AANCAAATTTTCTGCTTNNACACTTGGGCAAACNNTTCTAAATTTATCCTCCCANA
ACTTTCNCNCNNTTGGGGGGAGGTTTGGGGTTTCAACTCCNGAANAAAAAGAGGGGC
CCCCACCNNAGGGNNTNNTTTNTTTAAATTNNGGCCNNGGGGNTTNNANTTAAAAAA
NNGGGNTTTNNGGGGGACNNTTTTNTTTNACCCCCCCCCCTTTTTT

Sequence 333

GGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAACGTTGACCTTCCTTG
CCCAAGAATGAATGATTAAGTTGAAAAGCTGTGTTGTAGATCGTTCAGGCCTTCGT
CTGCAACTATCAGGAAATATGGGTAACCTCTTCCAAGAACTTCCCCACTCTTTTGATA
AGCATCTCGAAAATGTTGTTGGAACATCAATGGTGGTATTTTCTGAAGATGAAGAATTAA
AGCAGTTCTCAAAGAAAGAAGTTCAGGGAAGTTGAAATACGCATACTCGGCATCCTTGAA
GAAACTATGGTGAATTGTCCTCCTTTGCTAATAAGATCCACAAGATAGCCGTTCAACCA
GATAGAAAAAATGGGAGGTNCCTGCCCCAGGCTTTAAANTGANTNNCNCNCNAGCATCCC
CTTGGGGATNNGGTAANNCCNCCCCCNANCAAAAAAATTTTCCCCNCCNACC
NAATTNTGAAAAACNNGNGGGGGTTTAAAAATTTTGNGNTCNNAATTTNAAAAAAN
AN

Sequence 334

CCGGGCAGGTACTAGGAGATATTGATTCTAGTCAATTAGGCATTGTAGACTGTCATGACC
ACTTAATAAAAAATTATGGACCTGAAGCTCACGAGCATCCAGATTTTATTATGATGTCAA
AAGATGCTGCAATTAAGAAATGAATGAATATGTAGCAAAAGGAGGAAAACTGTTGTTA

TABLE 1
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CAATGGACCCCTCCTAACGTTGGGCGTGATGTTTATCAAATGTTAGATATTGCAAAGAAAT
TAGAAGGAAAAGCTAACATTATTATGGCAACTGGTTTTATATAAGCTGCATTTTATGACA
AAGGTGCTTCTTGACTTGCTTTGGCTCCAACAGATAAAATTGNAAAAATGGTTGTAGCTG
AAATCGAAGAAGGAATGGATGAATATACTACAGCGGACCAGTTGTAAAAAGATCTAAAT
CCAAAGCCGGAATTATTAAAGC

Sequence 335

CTCCCCGCGGTGGCGGCCGAGGTACCGCGGGGAAATGCAAAAAAATCAANNACAGTNNANT
CNAATACATCACAGATGTTNAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATATTTT
ACCACTTTTAGCAAATGGGAGANGTGCTAAATTACACAATTAATCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGTTTCTGTTTGGGACACCTA
CTGCAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAACCTAAAAAATTACCAGGAG
ACGTTNTTAGTTTGTAGTATGATTTAGAATATGGTAAATCAACTCTAGAAATCCAACTA
ATATGTTGAAAAAAGGC

Sequence 336

CTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCGGGGAAATGCAA
AAAAATCAAATCAATTTAATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGG
ATTGTATTTAAAGATATTTCAACACTTTTAGCAAATGGAGAAGTGCTAAATTACACAATT
AATCAAATGGCTGAGTTAGCTAAAGATGCAGATGTTATTATAGGTCCAGACGCAAGAGGT
TTCTTGTTTGGGACACCTACTGCAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAA
CCTAAAAAATTACCAGGAGACCGTTATTTAGGTTTTNGGGTNNAGATTTAAATTTGNGG
AAANCCCNNTTNTAGAAATCCAACTAATTNTGTTGNNAAGAGGCCAAAAAGTNCCAA
TTATTGGTGATGTTTGTAGCTACTGGCGGAACAATGAAAGCGATTATTAACCT

Sequence 337

CCGCGGTGGCGGCCGAGGTACCAATAATAGCAACCCTGTGATTTGTCCAAGTGCCCGGGA
GTGGAGGCCATCCTGACAACAGCTCTATGATTTTCTATGCCAATGACACAGGAGCCCAAC
AGTTTGAAAAGTGGTGGGATAAGTCCAGGACAGTCCCCTTTTATCTTGAGGGCTCCTCC
TCCCACTGCTCAATTTCAAGTCTCCTTCATTTTTTCAAATTTAATATCCTAGGCACAG
TGTCTGTCTTTATTTGATTTTCCCTGTACCTTTAAGGCTGTTGCTTGGGATTTTATT
TGGAATTTATTGGTTTATACCAACAGAATTTTTGTACCTGCCCG

Sequence 338

CCGGGCAGGTACCTGGAAGACTTCTCCACCTCGGGGGCCTGGCTGCCTCACAGGTATGAA
GACAACCACCATAACTGCTACTCTTACGCACTCACGTTTATTAACTGCGTTCTGATGGCA
GAAGGTAGACAGCAACTGGACAAGGGTGAATTTACGGAGAAGTACCT

Sequence 339

ATAAACTGCGGGATCTCAATGGCTTCTATGATCGTATTGAGGCAGTAGTTCCACACTCT
GCCCGGTGCCAGCATGAAAGAGAACAGGGAGAGTCAGCCTTTCACAGTCCTTGTCAAATC
CCAATTACTCTGGTTGCAGATCACTTGAAGCCTGCCTTGTTTCTCTACAAAGCTCTGCC
CGAGAGTCCAGCCCCGCGTACCTGCCCC

Sequence 340

GCGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACAAGATAGTCATNTCAGTAAAAGGT
CTATTATCTAACTTGCCAACTTGTTTANNGAGAGCCCTAAGGAACTAAAAGTCCATAA
TGCCNTGCACAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCTCCCTCCAG
TTCTCAGCAGGCCTGGCTGAAGGCCCAAGGAGGGAAGGAAATATAAGAACCAACAATAAA
AATAGCAATAGCAATAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCAC
CTNTCCCGGATCAGGCTTCCATTGCTCACGATGCTCACGCTGGGCAG

Sequence 341

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTCTAGGACAA
TCAGGAAGTAATCTTAAAAAATAATTGAAGATGTTAAAAAATACGTTAAAAAATAAAAA
CTTGTTTTAAACATAGATGCAGTAGAAATTGAAAAACCAGATTTAGATGCAAAATTATTA
GCTGAATCAATTGCAATTAATTAAGAAAACCGTGGATCATACCGTATGGCACAAAAATTT
GCAATTCGTTTAGCACAAAAAGCCGAGCTAAAGGTATTAATACTAAAGTTAGCGGTCGT

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TTAAATGGTGTGATATGGCTAGATCAGAAGGATATTCTGAAGGTGAAATGAAATTACAC
ACACTTAGACAAGATGTTAGTTATGCAACAGCAACAGCAAGAACAACCTTATGGAGCACTT
GGAGTTAAAGTTTGAGTTTCATTAGGCGAAAGTATTTGCAAAGCAAAATCAAGCATATAA
TGAAGAAGAACCAACNCACAAAAAGGGCCAAAAAGAGCAGCAAGAGTTAAAAAAGAA

Sequence 342

CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTACACA
GCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTG
GAGGGGCAGTTCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACC
TTGCAGTGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGA

Sequence 343

CCGGGCAGGTACCGCTGTGTCCGGGTGGGTGGTCATGAATGCCGTGCTCCAGGTGTTACAC
AGCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGC
CTGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCT
GGAGGGGCAGTTCGGGAGGAGTTTGTGTCCATCGATCACCTNTTGCCAGATGACAAGGN
GACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCAC

Sequence 344

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAACTTTAATTAATGA
GCTAACGTCATATTTTTTAAGTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAA
GATTACTTTATGAACAACAGCACCTTGAGATTGATTAAGTTAATAATCGCTTTCATTGT
TCCGCCAGTAGCTAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATAAT
TAAGTTTGGATTTCTAGAGNTTGATTTACCATATTTNTAAATCATTCTCAAAACTAATA
ACCGCNCCTCGGGAATTTTTTATAGGGTTTTNTACCCCTAAATAAAAAAGGGNTTNTT
TT

Sequence 345

CCGCGGTGGCGGCCGCCGGGCACGGTACCACCTGAATTATCTATTGAAAGAACTACTAC
ATCGAGTTTTTGTCTTTTGCCATTTCAATAGCTTCTCTTGTTTCAATTATCCCAATTTT
TTCATTATCTGAGCCGATAAGAAAACTTTGACAAATGGAATATTTCTGTTTACTCAATG
TTCTTGAAGTGGTTTAGAACGTGAAAAATTTTTAGGATTTGGTTTGGAATAATTTTTCC
TCCTTGATTAAAAAATAAAAAAGTGGTAAATCCACTTTCTCAGCAAAACAAAAATTATT
ATTAATAATAAACAATTAGTATTTGTAGCCTTTACCTATGAACACTTATTCATCAG
GTGAGAGTGAATCTTCTTCTGCAATAATTTCTAATTGCCCCGCGTCCTTGGCCGCTCTA
GAACTAGGTGGG

Sequence 346

CACTACTATAGGGNGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTAGGA
GATATTGATCCTAGTCAATTAGGCATTGTAGACTGTCATGACCACTTAATAAAAAATTAT
GGACCTGAAGCTCACGAGCATCCAGATTTTATTATGATGTCAAAGATGCTGCAATTTAA
GAAATGAATGAATATGTAGCAAAAGGAGGAAAACTGTTGTTACAATGGACCCTCCTAAC
GTTGGGCGTGATGTTTATCAAATGTTAGATATTGCAAAGAAATTAGAAGGAAAAGCTAAC
ATTATTATGGCAACTGGTTTTATAAAGCTGCATTTTATGACAAAGGTGCTTCTTGACTT
GCTTTGGCTCCAACAGATAAAATTGTAAAAATGGTTGTAGCTGAAATCGAAGAAGGAATG

Sequence 347

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCGTAGAAGAAGAAGG
AATACCTAAAGAAACAGACATAGAAATCATCCAGAAATCCCGGAAACTCTAGAGCCACT
GTCCCTTCCAGATGTGCTGAGGATCTCGGCAGTTCTGGAGGACACCACAGGCCAGCTCTC
TATTCTGAACCTACATCATGCCCGTTTCAGTACCT

Sequence 348

TNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAACTTTAATTAATG
AGCTAACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAA

TABLE 1
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AGATTACTTTATGAACAACAGCACCTTGAGATTGCGATTAAGTTAATAATCGCTTTCATTG
TTCGCCAGTAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTCAACATAT
TAGTTTGGATTTCTAGAGTTGATTTACCATATTCTAAATCATACTCAAACTAATAACGT
CTCCTGGTAATTTTTAGGTTTTCTTACCATAATAAAGGTTTTTTAAAAAGCTGCAG
TAGGTGTCCCAACAAGAACCTCTTGCCTGTGGACCTATAATAACATCTGCATCTTTAG
CTAACTCAGCCCATTGATTAATTGTGTAATTTAGCACTTCTCCATTGCTAAAAGGTGG

Sequence 349

TCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTAAAACAGGT
GCTCCTGTTAAATAGAGATCTTGCAGCTACTTCTAGAGATTTAAATTCTAAACGATCA
ATAGCAGCGTATCCTGTTCCGGCTTTAATAATCCGGCTTTGGATTTAGATCTTTTTACA
ACTGGTCCGCTGTAGTTATATTCATCCATTCTTCTCGATTTGAGCTACAACCATTTTT
ACAATTTTATCTGTTGGAGCCAAAGCAAGTCAAGAAGCACCTTTGTCATAAAATGCAGCT
TTATGAAAACAGTTGCCATAATAATGTTAGCTTTTCTTCTAATTTCTTTGCAATATCT
AACATTTGATAAACATCACGCCAACGTTAGGGAGGGTCCATTGTAACAACAGTTTTTCC
TCCTTTTGCTACATATTCATTCATTTCTTTAATTGCAGCATCTTTGACATCATAATAAA
ATCTGG

Sequence 350

TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACATTCTTCACTATCA
CTGTCCTGTAAATTTAGTAGCCTTGGCTGGAAACACTGTAGTCGACATGATCTGATATTG
CTTAATATTTAGAAAGAGACAGTCTATTTTACAATGTTTACTGGAAGCATTGGTCCGA
GAGAAATTAGAAGAAAAGTCTATAGTTTGGGAAGAGCTTGAAAACTATTGAGCATTTCA
GGGTCTATCTGTTTCAGGACTGGGTCATGTTCTGTGGATATTGGTCCATTATGACCCTT
CCACCTCTGCCAATTCGCCTCCTTGCAAATCCTATACATCTTCTTGGGACTGTAAGTGT
GTAAGGC

Sequence 351

CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAGCTTGGTGACTGTA
ATTAACAACAATGTATTTTGAAGTCACTGAGTAAATTTTAAAGTGGTTTTTCCAAAAAAG
CACATAAGGTAATGCACCGTTAATTAGCTATATTGAGCCATTCCACAATGTATAGATATT
TCAAAACATGTTACACATGATAAATCCAGTTTTTCTACGTCATTTTTTAAATTATATT
AATTTTTTATTTTGAAGTTTTTTCACAGATCTTTTTTTAGTATTATTACCTTCTGAT
ATATGTGTCATTATTGAAGAACCATACCTTTTAAAGGTATTATTTTGAATTAAGGTATG
TCAACAGTAAAAAATAACCAGTGGCCAGGCCATNGGGGCTCATGCCTGTAAATNCCAGC
ACTTTTTTCGGAGGCCCG

Sequence 352

CCGCGGTGGCGGCCGAGGTACCTGTGAAGACAGCTACACCTGGTTTCTCCTCATGCCT
TGATCCCCAGAACTGCTACCTTCACACGGCTGGAGCACTCCAAGCTGTGAATGTCATCT
TCAAAACAACCTCAGCCAGAGTGTCAATTTCTGTGAGAGAACAAGATTTGGGGCACTTTC
AAAATTAATGAAAGGTTTACAAATGACCTTTTGAATTCATCTTCTGCTATATACTCCAAA
TATGCAAATGGAATTGAAATTCAACTTAAAAAAGCATATGAAAGAATTCAAGGTTTTGAG
GTCCGTTGAGGTCAACCAATTTGAAATGGAAGNCATCGTTGCTGGGTATTGAAAGGTTT
GT

Sequence 353

CCTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTTTTTGTTTTATATTCT
TCAATCCTATTGATGAAAACTTAAAGATGAATTAGAAAAATCTTATGTAATTAGACAA
AAACCAAAAAAACAAAACTTATTTAGAAAGACTTGGATAATGATTGATTATAAAAAAA
TGATTGACCATACTTTATTAACCAGAGCTACATCTAAAGATATTTTAAACTTATTT
CACAAGCTAAAGAACATGGATTTAGAGGAGTTTGCATTAACTCTTCTGAGTTAAATTAG
CAAAAGAAAACTTGCAAATACAGATTTAGATATCGTTTCAGTAGTTGGCTTTCCATTAG
GTGCATCAAAACACACAAACCAAGGTTTTTGAAGCAAAATTAGCAGTTGAACATGGAGCTA
CTGAAATAGATATGGTTATAAATGTGGGTAAATTCAAA

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Sequence 354

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGTGCATGAAACCACACA
TACGGGCAAAAGCAGGAAGAGACTTTGCAGACATAAAAACCAGGTAAGTTTTGAGAGTCA
GGTGATTGCAAGATTTTTTTTTCTTTCATTGACACTTAGCTAATTTTGAGCCATATTTTT
AAATGTGTGTCTTTTCAGTTACTTGAAACCTCTTCTCCACCTCCCATCCTTTCCAAACC
TCCTCCAAGCCAATTTCCAGTTGGTTTAAAAGAAATCATTAGGGTGACCCCCACTCCCA
CTTCTGGAACCTCAGGCAGAGCTCCTGGGGTTCCTCC

Sequence 355

NNTTTTTTTTTTTTTTTTTTTTGCGTGGAATCCTTCACCTCTTGCTAAAGGAACAGTAA
TGTCATATCCTGTTAATCTTGCAGGAGGCGCTAATAAGAATTCAAATGCTTTCTCATTTT
TCTTGTAATAATTTCACTGAACTGAAAATGATTTAACAGCTTCGTGAACAACTAAAAGTC
TTCCAGTTTTTTTAAACAGAGTTAATAATTGTATCTGTATCTAAAGGAGAAATTGTTCTTA
AATCAATTAATTCTACAGAGTATTCTCCATTTAATTGTTTTAAAGCAGCTAGTGCTTCGT
GAACTTGTGCTCCATATGTTACTAATGTTAAATCAGAACCTTCTACTAATACATTTGCTT
TACCAATTTCAACTTCATAAATTCCTGCTGGAGCTTCTTGTTTGAATGAACGATAAATTT
TCTTAGGTTCTAAGAAAATAACTGGATCTGGGTCGTTAATAGCTGCGATTATAATCCTT
TTGTATCATAAGGAGTTGAAGGCATAACAACCTT

Sequence 356

AGGGCGAATTGGAGCTCCCCGCGGTGGGCGGCCGAGGTCTAACTTTAATTAATGAGCTA
ACGTCATATTTTTTAAGTTTTTCAATTCCGTTTAAAAATCCTAATTCAAGTAAAAAGATT
ACTTTATGAACAACAGCACCTTGAGATTGATTAAGTTAATAATCGCTTTCATTGTTCCG
CAGAGCTAAAACATCATCAATAATTGCTACTTTTTGGCCTTTTTTCAACATATTAGTTTG
GATTTCTAGAGTTGATTTACCATATTCTAAATCATACTCAAACTAATAACGTCTCCTGG
TAATTTTTTAGGTTTTCTTACCATAATAAAAGTTTTTTTTAAAAAGCTGCAGTAGGTGT
CCCAAACAAGAAACCTCTTGCGTCTGGACCTATAATAACATCTGCATCTTTAGCTAACTC
AGCCATTTGATTAATTGTGTAATTTAGCACTTCTCCATTTGCTAAAAGTGGTGAAATATC
TTTAAATACAATCCCTTCAATTGGGAAATCTTTAACATCTCTGATGTATTCTATTAAAT
GATTTGATTTTTTTGCATTTCCCCGCGTACCTGCCCGGGCGGC

Sequence 357

GAATGGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCT
ATTATCTAACTTGCCAACTTGTTTACTGAGAGCCCTAAGGAACTAAAAGTCCATAATG
CCGTGCACAGCTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCTCCCTTCCAGTT
CCTCAGCAGGCCTGGCTGAAGGCCAGGAGGGAAG

Sequence 358

AGGTACANGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTGCCAACTTGTTTACT
GAGAGCCCTAAGGAACTAAAAGTCCATAATGCCGTGCACAGCTTGAAAAGCAATTAAGA
GTAAGCAAGATTAGTTTTTCTCCCTTCCAGTTCTCAGCAGGCCTGGCTGAAGGCCAG
GAGGGGAAGGGAATATAACGGAACCCAACAATTAANAAATAGGCAATAGCCAATTAAA
GTAAGGAATGNCATCCCATGGGAGGCANCAACCATTAAATTTCTTGGGAACCCACTNTNT
CCNNGGATTGAGGGCTTCCATTTGCTTACNGATGGCTTACGCTCTGGNGCAGCCCCGGC
AACTCTTACTTTGCCAGGAAACCTCACCTCACTTTGCCAGGGTATTTCTNCCCCGGG
TCTTGAAAANGAAAATGGGCTTCNTCCACCTGAAAAAGGGTTNGAATCCTTTCTTCCCAT
TACCCAGGCTTTCCNTTTAAGCCAAAAAGGCAAAATCCCTCCTTTTTTGGCTTTTCT

Sequence 359

CTAATTGATCCTGNTCACATTCACTGAAATGGCATTGCATATTTATATGTTGCTNACAGC
TTATTGATTTAGGTAACCTATTGTGTCTTCCCTTCACTATCTGACCTGAAAAGCACTCTCT
CTCTATGCACTCTTATATTCTGCCTTTCTGCCTGGAGTTTGAAATACATGTCTCTTTAGT
TTCTTTTGACATGCTACATTGGGCTTTAGACCGGAGATAATACAGTGACTTTACCTCAC
AAATCATATTCTGTCAACACAAATCTATGAATTTAGTTTATTTAAAATCAGAACAATTTT
CTACAAAATTTTTCTGGAAAATAGACTCCTAACAGACCTACCAGAATCATGCTTAAAGTG
CTCCCTTGACACTTATTCTATACTGAAGGATAAATTTTAAA

TABLE 1
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Sequence 360

CCGCGGTGGCGGCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTG
CCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAACCTGCCATAATGTCGTGCACAGCTT
GAAAAGCAATTAGAGTAAGCAAGATTAGTTTTCTCCCTTCCAGTTCCTCAGCAGGCCT
GGCTGAAGGCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAATAGCAATAGCAAT
AAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACC

Sequence 361

TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTGTTTTATATT
CTTCAAATCCTATTGATGAAAACTTAAAGATGAATTAGAAAAATCTTATGTAATTAGAC
AAAAACCAAAAAACAAAACTTATTTAGAAAGACTTGGATAATGATTGATTATAAAAA
AATGATTGACCATACTTTATTAACCAGAAAGCTACATCTAAAGATATTTTAAACCTTAT
TTCACAAGCTAAAGAACATGGATTTAGAGGAGTTTGCATTAACCTTCTTGAGTTAAATT
AGCAAAAGAAAACTTGCAAATACAGATTTAGATATCGTTTCAGTAGTTGGCTTTCCATT
AGGTGCATCAAACACACAAACCAAGGTTTTGAAGCAAAATTAGCAGTTGAACNTGGAGC
TACTGAAATAGATNATGGGTATAAATGGTGGGTAAATTTCAA

Sequence 362

CCGCGGTGGCGGCCGCCGCGGCATGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCT
TGGTAGGCCATTACCATACCAACTAACTAATGTTCCGCACCCCCATTTTAAAGTGAAGCT
GTGAAGCTCCTTTCTATTACTCATCATGCGATAAATACTATATCCGGTATTAGCTATTG
TTCCAATAGTTATCCAGTCTTAAAGGTAGGTTAGGTACCT

Sequence 363

CACTACTATAGGGNTNATTGGAGCTCNCCGCGGTGGCGGCCGTGCTGTTGCTTGGCCGCG
CGCCAGGCTGGCCAGAGGTGCTGTTCCACTGGGGCGTGGCCGTGATGGTGTGCGCCGATC
GACGTTCTGTTTTAATGAAAGGATGGACATGCAACTGACACTCGCACAACTCTTGGCAAT
CATGCCAATGCCCGCTCCAAAGCGGGTATTTTTTGCTGCGCTAAACGTGGCCATGGC
GGAATTCGGTATCAACACGTCGGCGCGCCAGGCCGCGTGGCTGGCCACCATCGGTGTGCA
GTCCGGTAGCCTGCAGCGGGTAGAGGAAACTTGAACCTACCGCGCGGATCGCCTNCTCGT
TATTTTCGAAATACTTCACGCCGCGGCTTGGCCGCGAGCTTATGCCGGAAGCCGGAAA
TGATCGNCAACCGTGTTACGCCAACCCGCATGGGGGAAACG

Sequence 364

AGGTACTAACTTTAATTAATGAGCTAACGTCATATTTTTAAGTTTTCAATTCGGTTT
AAAAATCCTAATTCAAGTAAAAAGATTACTTTATGAACAACAGCACCTTGAGATTCGATT
AAGTTAATAATCGTTCATTGTTCCGCCAGTAGCTAAAACATCATCAATAATTGCTACTTT
TTGGCCTTTTTCAACATATTAGTTTGGATTTCTAGAGTTGATTTACCATATTCTAAATC
ATACTCAAACTAATAACGTCTCCTGGTAATTTTTAGGTTTTCTTACCATAATAAAAGG
TTTTTTAAAAAGCTGCAGTAGGTGTCCCAAACAAGAAACCTCTTGCGTCTGGACCTAT
AATAACATCTGCATCTTAGCTAACTCAGCCATTTGGATTAATTGTGTAAATTAAGCAC
TTCTCCATTTGCTAAAAGTGGTGAAATATCTTTAAATACAATCCCCCTTCAATTGGGGAAA
TCTTTAAACATCTCNGGATGGTATTCTATTAATTAATGAATTGAATTTTTTTGGC

Sequence 365

CCGCGGTGGCGGCCCGAGGTACCAAATAAAGGGTATTTGCTACCTTTAATACTTGCCAG
TTCAGGTTGGAGGCACAGGCAGCAGCAAGAATGGAAGAAATGTTCTTACAACATTTTCA
CAGGAAATGTCCAGTTAATTTGAATGAAATGCAAAGCTGAATATTCAGTTTATTCA
ATGATTTTGTGAATCTGAATTTTTTTGATTGATGGGGATTCACTTATCACATGTA
TCTGTGAGATATCATTTAAGCCTGGGCAGAACCTCCATTTCTTCTATCTGGTTGAACGCT
ATCTTGATGATCTTATTAGCAAAGGAGGACAATTCACCATAGTTTTCTTCAAGGATGCCG
AGTATGCNTATTCAACTTCCCTGGACTTCTTTCTTTGAGAACTGCTTAATTCTTCATCT
NCAGAAAGAATACCCCATTTGATGTTCAACAACATTTTCGAGATGCTTATCAAAAAGAG
TGGGGAAAGTTTCTTTGGAAGANGAGTTACCCCATATTTNCTGATTGTTGGCAGACGAAA
NGCCTTGAACGATCTACAAAACNCAGCTTTTTAACTTTTTAAATCNTTCAATTCCTTG
GGGCAAAGGGAANGNTNAACNTTGGTACCTTGCCCGGG

TABLE 1
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Sequence 366

CCGCGGTGGCGGCCCGCCGGGCAGGTACGCGGGGAAATGCAAAAAAATCAAATCAATTT
AATAGAATACATCAGAGATGTTAAAGATTTCCCAATTGAAGGGATTGTATTTAAAGATAT
TTCACCACTTTTAGCAAATGGAGAAGTGCTAAATTCACAATAATCAAATGGCTGAGTTAG
CTAAAGATGCAGATGTTATTATAGGTCCAGACCCAAGAGGTTTCTTGTTTGGGACACCTA
CTGCAGCTTTTTTAAAAAACCTTTTATTATGGTAAGAAAACCTAA

Sequence 367

AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCTACCAAC
TAACTAATGTTCCGCACCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCC

Sequence 368

ACCGCGGTGGCGGCCGAGGTACGGCCACACTGGGACTGAGATACGGCCCAGACTCCTACG
GGAGGCAGCAGTAAGGAATTTTCCACAATGAGCGAAAGCTTGATGGAGCGACACAGNGTG
CAGGATGAAGTTNTTCGGAATGTAACTGCTGTTATAAGGGAAAAAANAAAAAAAAAAAA
AAAAAAAGGTNCCTGCCCC

Sequence 369

GGCGGCCGAGGNACAATATAGNCATCGCNTTAAACNGCCNANTNTTAANCNCGCCAAACT
TGGTTACTGAGAGCCCTAAGGAACTAAAACCGCCATAATGCCGGGCACAGCTTGAAAAGC
AATTAGAGGAAGCAAGANNAGNNNTTCCCTCCCTTCCAGNNCCTCAGCAGGCCTGGCTGAA
GGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAAATAGCAATAGCAATAAGAAGA
ATGCCATCCCANGGAGCACACCAAAATTCNGGAACCAACCNCTCCCGGANCAAGGCNTCCAT
TGNTCACGAAGCTCACGCNNGGCAGNCCGCAACTTTACTTTGNAGNAACCTCCCCACTTG
GCCAAGGGAATTCNCCCCCGGGCCTGGAAGAAAAGGGNTCTCCACCCGGAAAGGGGCGN
ACCTTTTCCCAAAACCAGCCTTTCTTAAAGCNAAAAGCAAACCCNCTCTTTTGGGTTTC
NCAAAGGGGGCNGNACAAAAGGGAAGGGTTTTGGGGCNGGGGGGGGGAACAAAANCCCC
NCATTNGGAAGNTTGCCCCCGGCCGAGGGGAAGGGGAAAAGGTTGGNCCCCGGTTGGGGG
GGG

Sequence 370

ATTGTTGCTCNC CGCGGTGGCGGCCCGCCGGGCAGGTACANGGAACTGCCAAAGGCAACA
GAAATCTTTCTCCCTATGTCCAGCCTACCCCCACTTTACCGAGGCCAACAGCCGCCTC
AGAAACCAGATTCAGGAGCTAACATGCCCCAGGTCTCACGAGGATCAGAGACTCCAGAGG
CCAGGGAAGGAGANNAAGGTAGNCAAGCGGGGGTGGTCTCAAATCTGGTTGNGCTCGAGC
TATGCAAATGCCTCTCATGGAGATGCGAGGACCTATCTATTATGATGACCAGGGCCACAT
CCGGAGGGGGCAACAGACTTTCATNTATCAAGCCCTT

Sequence 371

AGGTACTATTGACTAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGTATATTACTTTTATGC
TTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAACATTAGATCAGTGGTTCTCA
GAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTTCATGAGTTCAGAATATT
TTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT

Sequence 372

CCGGGCAGGTACCGGGTCTAGGGAAGATGCAGAACACTTCAGCCTGGCAGAAGGCTCTAA
AGATCGTCAACCTTTCTCTGTTCATTTTGAAATTTTTAAAAATATGCTAACTTAGCTGA
AAATCTCATGGAAACCAGGCTCCTCATCAGACTTGAAAGTCAAACCGGTTTCTCAACAAC
TTCTCTTTATGGTTCTGTATGGCTCCACAGAAAACCAGAAAAACATTTGGGGCAAGAAGC
TATGACTCTGTGAGGCCACATGGGAGCAGGCAGTCAATTATTACACTAAGGAACACCCAG
TTAGCATGAAGTATCCCATCACCTCGGTATTAAGCCCTGCATGCATTAGCTATTACCT

Sequence 373

ACTTTTTTTTTTTTTTGGCTCAATAGAAGTATGGAATAATTCCAGGTAATTTAAAGCATA
TTTTTCAATTGGTGTAAGCTGCTCCATGAAGTCAGCTAGCTCCTCTAATTGGGATGGTTC
TTCATCACACGGCATGTTCTCAGAGTCTGATGACAGAGCATCAGTGTGTGGTCCCAGCAC

CCCCTCCTGTGCGGACTTCTGGGCATCCTCCTCCAGATACTCAATACTCTTGAGGGCCTG
AGGAAAGTCTCTATGAAAGGTCTTGCAATTTTGGGTGCAATGGTTTCCGTGACAGAAGGT
TCCTGAGAAAGCACCAAACTCCTCAGCTTTGACCGGAAGCCAGCATCACGGACGCGT
GGGTCGAAGCTTGACCT

CCGGGCAGGTACCGCTACTGAAATTATTAACATACACTACAGATCAATTATATAANTAT
GTTAATATCTTTAGAAATCAAGAGTTGCAGCATAAGAGAAAGGGATACAAAAACAAACA
AGCAAAGAAGTTACATAAAAAACGTAACGTTGTATTGAAAAACCAGTATGAACTTATGAT
TTAGTTTTCTTTCTAAAAACGGACGCGTGGGTGCAAGCTTGACCT

NGCGNTGCGCTCACCTGCCCNCTTTCCANTCGAGGNAACCTGGTCGTGCNAGGGTGCNA
NTAATGAATTGNCCAAACNCCNCCGNGAGNAGGCGGTTTTGCGTNATTGGGGCCGCT
ATTCNCTTTTCTCGCTCACCTGACTTCGCTGCCGCTCGGTCGNTCGGCTTGCCGGCCGA
AGCCGGGTAAATCAAGCCTCCACTCAAAAAGGGCCGGGTAAATTACCGGGTTTNTCCAC
CAANGAAATTTCAAGGGGGGATTAAACCNCNAAGGGAAAAANGAAACATTGTNNGANNC
AAANAAAGGGCCCNNNCAAAAAANNGGGCCCANGNNGAACNCNCCGTAAAAAAAAG

[illegible]

CGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGTGATG
CTGGCTTCCCGGTCAAAGCTGAGGAGTTTGTGGTGCTTCTCAGGAACCTTCTGTCACGG
AAACCATTGCACCCAAAATTGCAAGACCTTTCATAGAGACTTTCCTCAGGCCCTCAAGAG
TATTGAGTATCTGGAGGAGGATGCCAGAAGTCCGCACAGGAGGGGGTGCTGGGACCACA
CACTGATGCTCTGTCATCAGACTCTGAGAAATGCCGTGTGATGAAGAACCATCCCAATT
AGAGGAGCTAGCTGACTTCATGGAGCAGCTTACACCAATTGAAAAATATGCTTTAAATTA
CCTGGAAATATTNCATACTTTNTATTTGNGGCNAAAAAAAAA

[illegible]

Sequence 379

TABLE 1
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GAATTGNAGCTCCCCGCGGTGGCGGCCNNCCGGNCAGGTGGAAAGGTGGGTGGGGAGAGG
GAGGCTTATTTGTTGCTGCAGTGTAAGTGAACCTAATTCATATGACTCAAATAA
GGTATATTTGGTTAGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGTAAGTGTGTT
TGTTTGTAAGTTATAGCTGTAATTAATTTTCCCTGTATTCAAAGCCCCCAAACCTGCAT
TCAGATACTATGCATTTAGACTTCCTTAGGCCAAAGTCAAGGCAACAAGCTGATGATTCTA
AGCTATTATTCAAGGAGTATCTACCATCATAAAGGTGGTTTAAAGTCATATAGGATAATAT
CAATCAATAATACAGGGAGATGGCAAAAATTTTTGGGNAAANCCCAATATTANCTTGGG
TTTATGACCCCNAACTCACACTTTGGGGNCNTATGGGAAAGGCTTTTTTAAAGACCC
GGGAGTTCAAGACCNGCCCTGGGCAACATTAAAAAACCTCCTTTNNNCCAAAANCTTTAA
AAAA

Sequence 380

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTTACAAGTCGACCCAC
GCGTCCGCTTCAGAATATCCAATTCATGTGAAGTACAGGAAATTATAGTTTAGATATTTT
TAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTGATGACCAAGCTAGATCTCTTA
CCATATCATTAAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGTGGC
TCATTCCTGTGATTCCAGCACTTTGGGAGACCT

Sequence 381

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCC
GCATTTATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAA
TTGATCTTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGT
ATTAAATCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTTAAAGTGTGACCATGA
GGTGTTTTTTTGTGGACCATTTTAAAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGA
GTTAGGTAGAATGGGTGGTTATCTGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTG
GATTTCAATTCGGCACTTTATGTATTAGCTAAAAATTTTATGACCAAGTCTTTTGAAGTA
TACAAAGTAAATCTTCAAGGTGGATAGTTTATCCAAGTGTAAATGTGTTGCACTAGGTC
AGCTTGGAAATTTGAGATGACTTTTGGCATCATTGCATACATCTGGTTTGTGTACCTGCC
CGGGCCGCGCTCTAGAACNGTGGATCCCC

Sequence 382

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCA
GTTGGGGGAGAGAGAGGCGGAAGTATATTACTTTTATGCTTGGTTATACTAGAGAACAA
TNGAACTGACTAAAGAAACATTAGATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTC
CCAGCAACAGTCTGAGGAGGTTTATGAGTTCAGAATATTTTGATAATAACACTAAGATGG
TATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT

Sequence 383

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATATCTGCATATACACCAT
TAATTTTACATCGTTGAGGTAGCCAAAAGTCTCGTAAGTGGGCTTTTATTAAATAATAT
AATGTTCTTAATAGAGGAAAAAGGAATTGAATACATTTTTTAAAAACAAAATAACAAAACC
AATCCATTGTCCACAAAAGAAAATCAGTGGAGACAAAAGCAGTTTAATTTGCTGGATTC
TTTTGTGGCTTATTTTTTGTAGTATTATTTACAAAATGTTAGACTAATTTTTAAGCAATAT
TAATAATAAGCAACATACAACCTCCAAGAATAATATAATAAATAAATAAAGTGGGACGCGT
GGTTCGAAGCTTGTCTCGNNGGGGGCCGGGNCCTTCNAGGCCCNCCCGGGCAGGTACCCA
GTNATCACATAAATTCTGCAATCATNTGGNTATTNAGCTTNACNTGNTTTTTTTATTTGN
NGAANTTGTGTTGTATTGAG

Sequence 384

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTTACAAGTCGACC
CACGCGTCCGCTTCAGAATATCCAATTCATGTGAAGTACAGGAAATTATAGTTTAGATAT
TTTTAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTGATGACCAAGCTAGATCTCT
TTACCATATCATTAAATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGT
GGCTCATTCTGTGATTCCAGCACTTTGGGAGACCT

Sequence 385

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT

TABLE 1
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TTAAGAAATAGGGTCTCACTCTGTCCCCAGGCTGGAGCCATTATAGCTCACTACAGCTT
CTGACTCTAGGCTCAAGGGATCCTGCCACCTCAGCCTCCCTGGTAGCTGGGACTATAGG
CAGGAGATCGCTTGAACCGGGAGGCGGAGGTTGCTGTAAGCTGAGATCGCGCCATTGCTT
TCCAGCCTGGGTGCCAGAGCAAACTCTGTCTCAAAAAAAAAAAAAAAAAATAATAATAATAA
TAAATAAAAAGGCAAGGAATATAGGGAAAAGTCAAAAGAGATGGACTGTGAGAAGACTGG
GAAAGCCAGAAGAATGGNGGAAAATGTAGCATGGAGTAAGACAATAAAAATATAAGAGGA
CTCATTTTCGACGCGTGGGTGCGACTCACCTCGGCCGCTCTAGAAGTAGTG

Sequence 386

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTTACAAGCTTCGACC
CACGCGTCCGGGAAATTTTAATTAATAATAGGTGAACATTTTAAATGACCTAATACATAT
TTAGTCCACATTGAACTTTGGCATTGTGTCATTGCCATTAAATTTTATGATGGCATTAA
ATTTGATGCCATTAAATTTTATCAGTAGGTAGCATTTTTTTCTTAGCTACAATTGTTT
TTTTTAATTATAAGTATTAATAATTCATGAAGATGATTCTTTTTGTAAACAGTTTTGCA
TAAAAAGTAAGTCTCATTTTAAAGCAACTACCAACTTACTGGCCACCT

Sequence 387

AGGTCTTCGACCCACGCGTCCGATGGTTTTTGCAAAAATTGAAAATGCATCGATATTACA
GTTAATTTTTTCAGTGTGTATGTGGTATTAGGCTTAGAACTATAACACAGGAAGTTTTTA
GAGTATGTCCACTCTGGTTTACTCCTTTGTAAGTATTAATACCTGATAATTTACATCCTA
CAGCCCTGCCTTTTTTTTTTTTTTCAAGTTTGTCCCAGCAAGTCTTGGCCCTTTGCATT
TTCTTAATACATTTTAGTACCTGCCCG

Sequence 388

CCGCGGTGGCGGCCGAGGTACAAAGAACAAAGGGAAGCTAAGGAAGAAAAGATAGTCAAT
AAAAGATGTCTCATCTGGGCTTAGTGGCTCATGCCTGTAATCCCAACACTTTGGGAGGCT
GAGGCTCGAGGACTGCTTGAGTCCAGGAATTTGGGCAAGTAGGAAATTACTGAACAGCTG
CTATCACAGACAAATGCCTAACATTGTGAAGTGCTACACAGGGGAAGGAGACCCACGCTA
AGAGGAGAGCATGCACCCAGACACAGAATCAGAGGACACAGTTCAAAACACACATACAA
GAGGCTTAGGCACCTGTGGGCGTGTGTGTGCTCACAGCCAGCAAAATGAAAAAAATCCC
AGCTCTGAAGGAGAGGCAAGTGCATGGCTTCCGTACCTGCCCG

Sequence 389

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGA
TGGTTTTTGCAAAAATTGAAAATGCATCGATATTACAGTTAATTTTTTCAGTGNGTATGT
GGTATTAGGCTTAGAACTATAACACAGGAAGTTTTAGAGTATGTCCACTCTGGTTTACT
CCTTTGTAAGTATTAATACCTGATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTT
TCAAGTTTGTCCCAGCANGTCTTGGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGC
CCGGGCGGCCGCGGCCGCGGCCGAGGTACNACTACCTCTTTAAAGTTGTCCTTATTGGAGA
TTCTGGTGTGGAAANAGNAATCTCCTGTCTCGATTTACTANGAAATGAGTTTAATCTGG
AAAGCAAGAGCACCATTGGAGTAGAGTTTGCAACANNGANGCATCCAGGTTGATGGAAAA

Sequence 390

TCCCCGNGGTGGCGGCCGAGGTACTATTGACTAAAGTCAAGTTGGGGGAGAGAGAGGCGG
AAGTATATTACTTTTNTGCTTGGTTATACTAGAGAACAAATAGAAACTGACTAAAGAAAC
ATTNNATCATTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTNTGAGGAGG
TTCATGAGTTCAGAATATTTTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGG
TAGATATTTGCACTGGT

Sequence 391

AGGGCGAATTGGAGCTNNCCGCGGTGGCGGCCGAGGTCTTCNACCCACGCGTCCGATGGT
TTTTGCAAAAATTGAAAATGCATCGATATTACAGTTAATTTTTTCAGTGTGTATGTGGTA
TTAGGCTTAGAACTATAACACAGGAAGTTTTAGAGTATGTCCACTCTGGTTTACTCCTT
TGTAAGTATTAATACCTGATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTTTTCA
AGTTTGTCCCANCAAGTCTTGGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGCCCG

TABLE 1

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Sequence 392

CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGCTT
CACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCCTCACGAGT
TTAAAGATTGCTTCAGATCTTAAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCATT
CTGATTCTTGCAACTTACAAGTAGTCTTTTTTGTCTAGACGCTTTCAGGACCTTCTTTT
TTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTTGGGTACCT

Sequence 393

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAACTATTTAAGTGTGACCATGAGGTGTTTTTGTGGACCATTTTA
AAGCCAATGATAG

Sequence 394

GGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCGCCGGGCAGGTCTTCTACCCACGCGTCC
GCACATTTTGATGGTCAGTCAATAACTTAAGCAGTTACCAAAATACTAGGTATCCAAGGA
GCGAGAGGTGGGCGAGCATAAGAAACACATTTCTCATGGCACAGCTCTGCCAAAGCCCTG
CAGAATCATTTACACATAGGTCTTTGGTTAGTAGCCCCCTGGCACAGAATTCTGATCTTAA
ACAAATATTGTCTATAATCAAGTAGAGCAATGCAATTAAGCAAGCAAGGTTTTG
GGGCCATGCTGAAATCCAGCCTTGCTATTTGCTGGCTGTGTGACCGTGGTTCCTTGGTC
TCATTATGCTTTGGTTCCCGTATCTATAAACGAGCGTAATAATGTCTCCCTCTCATTAT
TGTGAAGTCGAAATGATGTCTGTAAAGTGCCCAACACAGTACTAAAGGGCTATT

Sequence 395

CCGCGGTGGCGGCCGCGCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGTTTAAGTAACAT
TCAGATTTGTGTGTGTGGAGAGGTTGTAGGGAACAGAATTGTAGGAAGGTGCTCACACCT
GTTTTGTTTGTTTGTTTATGTATATATGGTGGGTAGAAAATAAGGATTAATGAATGCA
GTAAGGTATTTGAGCACTCTTGTTTATCTTGTTAGGTGCCAACCAATATTTTTATAGA
GATGTGGTTAAGCCTCTTGGCATGTTCAACTGTGTACCT

Sequence 396

CCGGGCAGGTCTCTTGTCTAGTATACTCAAGGCAGCCTAGTAAATTATTATTTATCTATA
CAATACTGGAAAACTTGTAGACAAAAACATGACTTGAATTGCTAAAAAAAAAAAAAAAAAA
NGANGGAGAATGAAAACCTCCGGACGCNTGGGTGCAAGCTTGACCT

Sequence 397

AGGGCGAATTGGAGCTCCCGCGGTGGCGGCCGAGGTCTTCGACCCGCGCGTCCGCATTT
ATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATC
TTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTA
TCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTAAGTGTGACCATGAGGTGTT
TTTTTGTGGACCATTTTAAAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGG
TAGAATGGGTTGGTTATCTGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTC
AATTCGGCACTTTATGTATTAGCTAAAAATTTTATGACCAGATCTTTTGAAGTATACAAA
GTAAATCTTCAAGGTGATAGTTTATCCAAGTGTAATGTGTTGCACTAGGTCAGCTTGA
ATTTTGAGAT

Sequence 398

TTAGGGCGAATTGGAGCTCCCGCGGTGGCGGCCGAGGTGCGCATGTTGGCTGGGCTGGT
CTCGAACTCCTGACCTCAAGTGATCTGTCTGGCCTCCCAAAGTGTGGGATTACAGGCT
ACTAAAGCTTTTTATTTATTTCTGTGGATTTGAGTTATTGTGTAGTGTCAATTTATTTTC
ATATGAAGGATTCCTTTTGGTATTTTTGAAGAACTCTTTATCAGAATTAATTATCTCA
CTTTTGAATAATTTTAAACATCTAGAAACGTCTTTTTTGTGTTTGAAGAATAGTTTCT
GGATGTAAATTTTTGGTTAATTTTGTGTTTCTTTGAACACTGAATATTTAATCTTATGC
CTTCTGGCTTTCAGTACCTGCCCG

Sequence 399

CCGCGGTGGCGGCCGAGGTAGCTTGAGTCGACCCACGCGTCCGTTTCCAGATCCGTTTCAGA

TABLE 1
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AACGTGAGTCTCTAGCTCAGGAGATTTCCACAACCTGTCCTTAGTAACCTGATCTTATTCT
CATGTTTAAACCTTGGCAGTGGGAAGTTCTTCCTGGTATCCTGCCTAATTTACTGGAGTTG
GCATTAATGCCATTTCCCCCTAAGGCGTGGCTCTTGGACCAGTATCACCTGAGAATTTGA
TAGACATAGACCCAGAGTTACTGAGGCAGGTGCTCTGTTTTGGGGACCAGCAATCGGTGC
TTTAGCAAGTTCTTTGGGTGATAGGGTTTGGAACTACTGCTCTAAAGCATCATCTGTTT
TGACTTTGCCATGCACAATCTGAACTCACTCCCGTGAGGCCCTGCTCCTGATACTTTAAA
TCGTCCTGTCTCTTTTTCTGCCTCTCTGTGGAG

Sequence 400

CCGGGCAGGTACAGGCACCTATAGAATTTAAAGGGGAGATTTCTTTATTTTGTATTCAAT
GTATTAATAAGATTTTTTAAACATATTTTGGAGAAATTGCTAATTAGTGTATAATCCTGA
TGCCAATTCTAAAAACCTTTTTTTTTTTTGTAGAGACAGGGTCTTATTCTGTCACCCGG
GCTGGAGTGCTCTGGTATGATCCTAGTTCACTGCAACCTCAAATACCTGGTCTCAAGCAA
TCCTCCACCTCAGCCTCCCCAGTAGCTGTCTCTATAAGCATGCACCACCACACCTGGCT
AACCTTCTTATTATTTTTGGTAGAGACAGTCTCACTATGTTGCCAGGCTGGTCTTGAAC
TCCTAACCTCAAGCAAACATCCCTCCTCGTGCTCCCAAATGCTNGGATTACCAGCATTA
AGCCTTACAAGCATAAGCTACCATGGACTGGCTTCNAAAAAATATTTGGTTTAAATTC

Sequence 401

CCGCGGTGGCGGCCGCCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGT
TGCTGCAGTGTAACCTAAGTGAAACCTAATNNATATGACTCAAACCTAAGGTATATTTGGTT
AGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGNAACCTGTTGTTTGTGTAAGTTA
TAGCTGTAATTAATTTCCCTGTATTCAAAGCCCCCAAACCTGCATTGAGATACTATGC
ATTTAGACTTCCTTAGGCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAA
GGAGTATCTACCATCATAAAGGTGGTTTAGTCATATAGATAATATCAATCAATAATACAG
GAGATGGCAAAAATTTTTGTGAAGAGCCAGATAGTANCTGAGTATGATGACCCCTAATC
TCAGCACTTTGGGAGGCTGATGGGAGAGGGTCATTTAAGACCAGGAGTTCAAAGACCAGC
CTGGGCAACATTAAAAACTCCATTTCTACCAAAAACTTTAAAAAAATTAGC

Sequence 402

GCGGTGGCGGCCGAGGTCAAAGCTTCGACCCACGCGTCCGGGGAGGACCTAGGCAACGGCC
TGAGACTCCGAGACTCTATGTTGAAGATGCCTGGACTAACCTACTGAAGATACGTGGTTT
TACCAACAGCCAGCACCAATAGGAAGATATGAATGAAGCCATCTGAGACCAGCCATCTGG
CAGCCAACTGCCAACTGACTGCAAATGCATGAATGATCCCACTGACACCAGCTAGAGCA
CAAATGAGTTGCCTCCACTGAGCCCAGCCAAATTGTTATCCTATAAAATCATAAAAAACA
TAAACAGTTGTTTTAAGTCAAAAAAAAAAAAAAAAAAAGTGCGACCTGCCCG

Sequence 403

TACTATAGGGCGAATNGNAGCTNCCCGCGGTGGCGGNCGAGGTATTCAACAAGGGCCCTG
AGAGAGGGACAGGCAGCCCCTGTGAATCTTGCTGTTGAGCAGAGACAGGAGTCAGCACGT
GTGAGGGCAGCAGGGAAGTCTTCCTGGAGGAGTGAGACCTGGCGATGAGGAGGCACGGCA
GGGAGGTGGAACAGGCAGGAGAGACTCTTCAGGAATTGAGGAGATAGAATAGAGGACACT
AAAGCCTTAGAGAGGCCAGGGGTGGTGGCTTGGCAGGATCATCGCTTGAGGCTAGGAGTT
TAAAGCAGCCTGGGCAACATAGCGAGACCCCATCTCTAAACACAAAAATAAAACCTG
CCCG

Sequence 404

CCGCGGTGGCGGCCGAGGTCAAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGT
CAAAGCTGAGGAGTTTGTGGTGCTTCTCAGGNACCTTCTGTACGGAAACCATTGCACC
CAAAATTGCAAGACCTTTCATAGAGACTTTCCTCAGGCCCTCAAGAGTATTGAGTATCTG
GAGGAGGATGCCAGAAGTCCGCACAGGAGGGGGTGGTGGGACCACACACTGATGCTCTG
TCATCAGACTCTGAGAACATGCCGTGTGATGAAGAACCATCCCAATTAGAGGAGCTAGCT
GACTTCATGGAGCAGCTTACACCAATTGAAAAATATGCTTTAAATTACCTGGAATTATTC
CATACTTCTATTGAGCAAAAAAAAAAAAAAAAAAAGTGCGGCCGCTCTAGAACTAGTG

Sequence 405

TABLE 1
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TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCC
GGAAGTTTTTCATTCTCCCTCTTTTTTTTTTTTTTTTTTTAGCAATTCAGNCATGTTTT
TGTCTACAAGTTTTTCCAGTATTGTATAGATAAAATAATAATTTACTAGGCTGCCTTGAGT
ATACTAGACAAGAGACCTGCCCCG

Sequence 406

TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTAC
CTGAAAATGCTTATTCTAGCTTCACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATT
AGACTTAATTTTCTCACGAGTTTAAAGATTGCTTCAGATCTTAACTTCTAATGAGGAA
AGCTGAGAAGTCCAATGCCATTCTGATTCTTGCAACTTACAAGTAGTCTTTTTTGTCTA
GACGCTTTCAGGACCTTCTTTTTTCTCAGTCAGTGTATCCAAACCTTCACAGTGATATC
TTTTGGGTACCT

Sequence 407

CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTCTCTTATATTGAAGTAAAATTTA
AAATTTAATACTTTTTATTTTTTAAAGCATGTATGGCATCATTTCACTCTTATTAAAT
CTCTCTGCATCCATTCACCCATCCTTCTTTTTGTGTGTGTGTGTAGTGGTCTCTGTGAGA
GGGTTCATTAATGTCAATCCTGATCATTTCTTCTCAAGAGATGTCAGTAGATTTGTTTT
TTTTGCTTTGGACTTTTATGAATTGATTGAATTTTTATGCCAATTATTTTTAAAGTATTA
CATAGAAGAACAAATGGACAGAAAAATTTAAATGCAATCAAATCTTGTTGATTTGAAGT
ATAGGAAATAATCTTTTTTTTATTATACTTTAAGTTTATAGGTACCTGCCCGGGCGGCCG
CTCTAGAACTAG

Sequence 408

CCGCGGTGGCGGCCGAGGTACTATTGACTAAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTTATGCTTGGTTATACTAGAGAACAAATAGAACTGACTAAAGAAACATTA
GATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTGATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT

Sequence 409

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCCGGGCAGGTTACAAGTCGACCCAC
GCGTCCGCTTCAGAATATCCAATTCATGTGAACACAGGAAATTATAGTTTAGATAFTTT
TAAATGATTTGCCTGTCACCGTATAACACAAGGGTGTGATGACCAAGCTAGATCTCTTTA
CCATATCATTATAAAAGTCAAATTTTAAATTTGTGCCAATTTGGCTGGGTGTGGTGGC
TCATTCCTGTGATTCAGCACTTTGGGAGACCT

Sequence 410

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGACCAGTGCAAATATCTACCCAGT
TAGAAGAGTAAATACCATCTTAGTGTTATTATCAAATATTCTGAACTCATGAACCTCCT
CAGACTGTTGCTGGGACTCCCAGATATCAATACTCTGAGAACCACTGATCTAATGTTTCT
TTAGTCAGTTTCTATTTGTTCTCTAGTATAACCAAGCATAAAAGTAATATACTTCCGCCT
CTCTCTCCCCCACTGACTTTAGTCAATAGTACCT

Sequence 411

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACGCGTCCGA
TCACTTTTTTCATTGATACCTTATTAGATAAAACATTAGCCCCCTAGAGTGNNNTGTGAA
GGAAATATGCCTAATAAGAGATGATAGTTTTAGCAATAAATGAGCATTAGAACTATTATT
TATTAATGAAATGAACTGGTGGTCTGAAAGTGATGATAAACAGACAACTGTGGAAAATGA
ATTATTAATAATCCATGGAATTCCTTTTGAAGTTTATGAAGTACCTGCCCCG

Sequence 412

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGC
ATTTATTAAGGCTTGATATGTTCAAGATCCAGTGAAGACTGTCTTGGG

Sequence 413

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCCGGGCAGGTACAACTTGTGATGCTT
TTGGCAGGAATTACAGAACCAATGCCATTCAAGTTGTGGAGATTATACTNGCAGGTG
AACTCGTAAAGAGAAGATTCTGGAATGCCTATATCTGAAAGCTTGAGTCGACACCTN

TABLE 1
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Sequence 414

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGGAATGAGTGAGTGCAGAACTGGC
AACCAGAAGACAGGAACAAGGCCTGGGAATGGAGCGGAAAGGTAGCTGCTATATATAGTT
CCTTCAGCCAGTAACGATTAGAGCCAATAGCCATCTGGATGATGAATGGCTCCTAATTGC
CTAAATTACGGCAGTTAGCTAAGGGTTTCTGTTGCTACATGGGTTACCGTAGGCCGCTG
CACCCTGCATAACTGTCCTCAGGCCTGCGTCCCCTGAGTCTCAGCACTTGGGCCTCCACC
TGCCCG

Sequence 415

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCCCAAAGTGCTGGAA
TCACAGGAATGAGCCACCACACCCAGCCAAATTGGGCACAAATTTAAAATTTGACTTTTA
TTAATGATATGGTAAAGAGATCTAGCTTGGTCATGACACCCCTTGTTTATACGGTGACAG
GCAAATCATTTAAAAATATCTAACTATAATTTCTGTAGTTCACATGAATTGGATATTC
TGAAGCGGCCCCNTGGGTCGACTTTGTAACCTGCCCGGGCGGCCGNTCTAGAACTAGTGG
GATCCC

Sequence 416

TATGGCGAATTGGAGCTCCCCGCGGTGGCGGGNCGAGGTNAAGCTTCGACCCACGCGTCC
GATTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTTTCTAATGTCTNTATT
CTTCCAAAAAAGT

Sequence 417

CCGCGGTGGCGGCCGAGGTAATCTTGATGTCATAAGATTAGAAAATGTGGTTAATTGTCA
TCAACCCATTAAGTTCTTAAATGTCATTGAATGGAGTCCTTGTCATGTTACAGAGGAGCG
TAAATTTGTGGTTAAACATTTTTTAAAGATTACATGGTAGAGCCACAGTTTGTATGCA
GAAGGAAAATTTAGCAAAATATTATTTGCTTAATAGCCTTTAAAAAATCGTATAAATTTG
ATTTGTAGTTTTATCCCCAGAGTCATTAGATTTTTCCAAAAAAGT

Sequence 418

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCCT
TAACTTAGATTGTTACTTATGTTTCTAAATCTGNNGAAGCACATTTCTTTTNTNTNNT
TTTCTTTTACTGTTAATATCCTTATTCTCTATTTTACCAGTGGAGAATGNTTAGTATTAA
TTTCCATTNCTCANGATTCAAGAAATGCAAAGTGCTATTTTTATCAAATTTCTGAAAG
CCTACTGTCTTCTGNTTTGGAAGTCCCACAACAGCTCTTTAATTTCTTAAGCCCCACTT
TCCTCATCAGCAAGTTGGTGTGGCAATGGATCATAATAGGTTGCTGGGAGGATGAAGTGA
GCGGACCGCGTGGGTGCAAGCTTGACCTN

Sequence 419

CCGCGGTGGCGGCCGCACTTTTTTTGTATTACTTCAACTTTTTAAAAATTCTAAAGAAAAC
CATCATCTCAGACCAGCATTTCCGGACGCGTGGGTGCAAGCTTGACCT

Sequence 420

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGTCAAACATCT
CCCTCGTCCGGATCCTTCTAACGCAGGAGTCTCAGACGCAAATGCCGGCAAGGGCCAGGC
AGGTGATGTAAGATGCGTGGAGCAGATGCCAAGCCACAGGGAGTGGTGGAGACTGGGGTG
AACTGGAAAGCACCT

Sequence 421

CCGCGGTGGCGGCCGCCCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGT
CATCTCAAAATCCAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCT
TGAAGATTTACTTTGTATACTTCAAAAGATCTGGTCATGAAATTTTGTAGCTAATACATAA
AGTGCCGAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACC
AACCATTCTACCTAACTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAATG
GTCCACAAAAAACACCTNATGGTCACACTTAAATAGTTTGCATCCCACTACAGGCT
TCTCTGGAGGGATTTAATACTTTGG

Sequence 422

GGTGGCGGCCGCCCGGGCAGGTGTCAAACATCTCCCTCGTCCGGATCCTTCTAACGCAGG
AGTCTCAGACGCAAATGCCGGCAAGGGCCAGGCAGGTGATGTAAGATGCGTGGAGCAGAT

TABLE 1
73/467

GCCAAGCCACAGGGAGTGGTGGAGACTGGGGTGAAGTGGAAAGCACCT

Sequence 423

TNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACATAATATAC
AGAGGTATAATCTGTAACATCAATAATGTAAAGTGGGGAAGGGCAAGGTGGAAAAGGAGT
AGAATGCTTGTATGTGACTAAAATTATGTTGGTATCAGTTTAAAAATATATTATTATACT
TTAGAATGCTATACCCATTCCCACAGTAATCCCATAGTAACCAAAAAGAAAATATCTGT
AGGATACACACAAAAGAAAATCAGAAGTAGATGCAAACTTGTCACTACAGGAAAAAAAAA
GCTATCAAAATAGAAAACAATAATGGAGAAAATAAGACACCAAAAGCTATAAGACTCACA
GAAAATAAATAATAAAATGGCAAAAAGAAGCGGACGCGTGGGTCTGAAGACCT

Sequence 424

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAAGCTTCGAC
CCACGCGTCCGATTTGGCAGAAATTCAGGGTAATGTCAAGGTTCTTAAATCTGAGAGAGA
CAAGATCTTCTTCTTTATGAACAGGCACAGGAAGAAATTACCCGACTTCGACGAGAAAT
GATGAAAAGCTGTAAGAGTCCTAAATCAACAACGGCACATGCTATTCTCCGGCGAGTGGA
GACTGAAAGAGATGTANCCTTTACTGATTTACGAAGAATGACCACAGAACGAGATAGTCT
AAGGGAGAGGCTAAAGATTGCTCAAGAGACAGCATTTAATGAGAAGGCTCACCTGGAACA
AAGGATAGAGGAGCTGGANGNCCNTCCCGGGGGCCGGGNCNGCCCGCCCCNNGCAGGGT
CANATGATTGCAGAATTTATGTGATTCTGGGGT

Sequence 425

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTTACTGAGCCACTTA
CAATTATTTCTGAAAAATCTCAGAGAACTGAGGATAGATCAGAAAATTTAAAGAAAGCAA
ATACCAAATTTTCAAACCAGGATAGGAAGTGAATACCTTGTAAATACACTTTGTAAAGTG
ATGATAATTCTGAGTAAAAATTTAGAAGATTTTGAGAAAAGCATTGAACTTCTAGGGGC
CAATAAAATACCATGCAGAAGAATGTTTAAAAAGTCATGCCAAATTTGAATCCATTTGAT
CCTCAACCTCATCAGATGTTATATGCCAACTACTTATTTGGCTTAGATAATAATCATA
TAGAATGAAACTTTCCACAAATAGACTGTGGTCAGTGGCTG

Sequence 426

CCGCGGTGGCGGCCGCCGGGCAGGTCAAGCTTCGACCCACCGTCCGGCAATGATGAGCA
AAAACAAGTTTGGTCCCCCTGTTATAGNGCCTGGTAAAGTTTTTGTGTTGTTTGCAG
GGGTGGGGGAACCAGGAAATCAGATCATCACACAATATATACTTATCTGTAAGTATGGT
AACTGCTACAGCAAAGGGCGTATCATACTATTAGCATACTAAGTTTCACTTAAAGAGGT
CGGA

Sequence 427

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTGTCAAACATCTCCCTC
GTCCGGATCCTTCTAACGCAGGAGTCTCAGACGCAATGCCGGCAAGGGCCAGGNAGGTG
ATGTAAGATGCGTGGAGCAGATGCCAAGCCACAGGGAGTGGTGGAGACTGGGGTGAAGTG
GAAAGCACCT

Sequence 428

TANGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTCAAGCTTCGACCCAC
GCGTCCGTGATACTTCTCCTAAGTGCCAGGCATTGTATTACATGTTGGGAGCACAAAGA
TGAATAATAACAATAGGTTACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCA
GGAGCCCTCAGCGTAGTAGGGGGTTGGTGTGGAGGGTGGAGGAATGGAAAAGGCCCTGA
AATGCAGGCAGAGAAATGATGAAACAATTCAGGGGCTGTGGTGAAGTTAAATGAATATCT
TTACAGCAGCCTCNAAGACTGATCAGGTTACTATACCCTCTCTTNTGTCCACNGTGCATT
TNAAT

Sequence 429

CCGGGCAGGTCAAGCTTCGACCCACCGTCCGGCAATGATGAGCAAAAACAAGTTTGGTCC
CCCTGTTATAGAGNCTGGTAAAGGTTTTTGTGTTGTTTGCAGGGGTGGGGGAACCAGG
AAATCAGATCATCACACAATATATACTTATCTGTAAGTATGGTAACTGCTACAGCAAAG
GGGCGTATCATACTATTAGCATACTAAGTTTCACTTAAAGAGGTCTGGA

Sequence 430

TABLE 1
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CCGGGCAGGTACACTCCAGCTCCTCTATCCCTTGTTCCAGGTGAGCCTTCTCATTAAATG
CTGTGTCTTGAGCNATCTTTAGCCTCTCCCTTAGACTATCTCGTTCTGTGGTCATTCTTC
GTAAATCAGTAAAGGCTACATCTCTTCAGTCTCCACTCGCCGGAGAATAGCATGTGCCG
TTGTTGATTTAGGACTCTTACAGCTTTTCATCATTTCTCGTCTGAAGTCGGGTAAATTTCTT
CCTGTGCCCTGTTTATAAAGAAGGAAGATCTTGTCTCTCTCAGATTTAAGAACCCTTGACAT
TACCCTGAATTTCTGCCAAATCGGACGCGTAGGTCTGAAGCTTGACACCTCGGCCGCTCT
AGAAGTGTGGGATCCCCCGG

Sequence 431

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACGATTTAAAATCTC
CTCCTCTACAGCGGTGAGTATTGAAGCAGGTCTTTGAGGATGGGCNNGAATTAGAGTC
ACCAAAGGAGGAATACCCTCACAGTTTTCTGCAAGAGTCTCTTGAAACAATGGATGGTGT
TTATGGGTCTGGGAAGACCCCNCGCCCCAAATGTTGCTCCCCT

Sequence 432

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACACAAACACACACACAA
AGTTTAATATACTTTTTAAAAAATTTTATTGTATTGTTTTCTTGAAATAGGGTCTTGCTA
TGTTGCCTAGGCTGGTCTTGAACCTCTGGGATTAAGCAATCCTCCCACTAAGCCTTCCA
AAATGCTGGCATTACAGGTGTGAGCTACCACAATCAGTCTCTTAGATTTTGTTTTTTAAG
AACAATTCGAAGTTTACTGCAAAATTGTGAAGAACGAACAGACTGTTCCACATATCCCT
TTTTCTTTACACACCGGACGCGTGGGTCTGAAGCTTGACCTGCCCG

Sequence 433

CCGCGGTGGCGGCCCGCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGGCTTGAGGTGGG
TTAGGAAACATTTGGTATCTNTGGCAGGGACAGATGTTGACCTGGCCGGTCCGGCAGCTT
TTACAAACCTAAGGACTTCAGGGTCCGTTGCGCATGAGGACCGGGGAGGACAGAGCTGT
TTGCAATAGGTGTGGGCTTTTATAGCATTGTGAGCATTTCACGTTAGCGTAAGTGTGCT
GCTGTGCAGGTGGTCTCTGGGGCTTACAATCTTCCCCAATGTTCTTCCCCACCCCTCCCA
CCATTCTGGTGAACAAGCCTCTTGGGATTCTTTGAAAAAAAAAAAAAAAAAACCT

Sequence 434

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACATAATATACAGAG
GTATAATCTGTAACATCAATAATGTAAAGTGGGAAGGGCAAGGTGGAAAAGGAGNNGAA
TGCTTGATGTGACTAAAATTATGTTGGTATCAGTTTAAAATATATTATTATAACTTTAG
AATGCTATACCCATTCCACAGTAATTCCCATAGTAACCAAAAAGAAAATATCTGTAGGA
TACACACAAAAGAAAATCAGAAGTAGATGCAACTTGTCACTACAGGAAAAAAAAAGCTA
TCAAAATAGAAAACAATAATGGAGAAAATAAGACACCAAAAGCTATAAGACTCACAGAAA
ATAAATAATAAAATGGCAAAAAGAAGCGGACGCGTGGGTCTGAAGACCT

Sequence 435

CAGGTACAGGCACCTATATGAATTTAAACGGGGAAGATTTCTTTATTTGTATTCAATGT
ATNAATAAGATTNTTAAACATATTTTGGAGAAATNGCTAATTAGTGTATAATCCTGATG
CCAATTCTAAAAAACCTTTTTTTTTTTGNAGAGACAGGGTNTTATTCTGTACCCGGGC
TGGAGTGCTCTGGTATGATCCTAGTTCACTGCAACCTCAAATACCTGGTCTCAAGCAATC
CTCCACCTCAGCCTCCCAGTAGCTGTCTCTATAAGCATGCACCACCACACCTGGCTAA
CCTTCTTATTATTTTTGGTAGAGACAGTCTCACTATGTTGCCAGGCT

Sequence 436

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTATTCAACAAGGGCCCTGAGAG
AGGGACAGGCAGCCCCTGTGAATCTTGCTGTTTCAGCAGAGACAGGAGTCAGCACGTGTGA
GGGCAGCAGGGAAGTCTTCTGGAGGAGTGAGACCTGGCGATGAGGAGGCACGGCAGGGA
GGTGGAACAGGCAGGAGAGACTCTTCAGGAATTGAGGAGATAGAATAGAGGACACTAAAG
CCTTAGAGAGGCCAGGGGTGGTGGCTTGGCAGGATCATCGCTTGAGGCTAGGAGTTTAA
AGCAGCCTGGGCAACATAGCGAGACCCCATCTCTAAACACAAAAAATAAAACCTGCCCG

Sequence 437

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACCACGTAGCAAC

TABLE 1
75/467

ATATGAGTATTTCTCTAGATAACTTTTTTTTTTGACAAGGTCTCACTCTGTTGCCAGGCT
GGAGTGCAATGGTGCAATCTTGGCTCACTGCAGCCTTGACCTCCCTAGCTCAGCTGAAC
CTCCCATCTCAGGACACCATTCCTCCACTGCCCATCCTGCATCTGCCTGCCTACCCCAA
AAGTGTTGAGAATACAAGCATGAGCCAGAGCCACGGAACCTGGCCTCTAGAGAGACTTTC
TATTTTAGTTTTTTCTTCTCTTATTTGTGAAGCCTTGAAAAAACTACTGTGGTTTATTTA
GATTCTGGTTTGTGACTTTTTTAAATAAACTTTTTATTTTGAATAAATTTATGTTTAGA
GAATAGTTGCAACATAATAAAGTGAGTTTTTATAAACGCCTTACCAGTTTCCCTGNTG
GTTAACATTTTACATCACCATGCTGTTGCATTGGTCAAACTA

Sequence 438

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAATATTTAAGTGTGACCATGAGGTGTTTTTTGTGGACCATTTTA
AAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGGTAGAATGGGTTGGTTATC
TGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTCATTCGGCACTTTATGTA
TTAGCTAAAAATT

Sequence 439

TCGAGGCCGCCCCGGGCAGGTACACAAACCAGATGTATGCANTGATGCCAAAAGTCATCTC
AAAATNGCAAGCNGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGA
TTTACTTTGTATACTTCAAAAGATCTGGTCATGAAATTTTNAGCTAATACATAAAGTGCC
GAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACCAACCCA
TTCTACCTAACTCANGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAATGGNCCAC
AAAAAACACCTTATGGTCACACTTAAAA

Sequence 440

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTAAACTTAAAGTA
TAATAGTAATAATAAAAAAGAGGTGCTTTTCTCCTAAGTCAACATTTTAGAGGAAAAGA
GTCAATTCAAGCAATTATCACATATGTGTAAGTGAAGCACATATGTGTAAGTTTCAAGA
GTGATTAGATGGTCTGTTGTCTTTGAAGTGATAGTCAAATATCAGGTGTGTTCTAGGGAG
GTTGTGTAAGACTTTTGCTTGTATTCTCCCGACGCGTGAGTCGACTCAAGACCTGCCCG

Sequence 441

CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACG
CGTCCGATTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTNTCTAATGTC
ATATTCTTCAAAAAAAAAAAAAAAAAAAGT

Sequence 442

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTTACAAGTCGACCCACG
CGTCCGCTTCAGAATATCCAATTCATGTGAAGTACAGGAAATTATAGTTTAGATATTTTT
AAATGATTTGCCTGTCACCGTATAACACAAGGGTGTGATGACCAAGCTAGATCTCTTTCA
TATCATTATAAAAGTCAAATTTTAAATTTGTGCCCAATTTGGCTGGGTGTGGTGGCTCA
TTCTGTGATTCCAGCACTTTGGGAGACCT

Sequence 443

CGCCCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGTCATCTCAAATTC
CAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGATTTACTT
TGTATACTTCAAAGATCTGGTCATGAAATTTTGTAGCTAATACATAAAGTGCCGAATTGA
AATCCAGAATACAATAGCTATGAAGGGCCGNTAGAGTGCAGATAACCAACCCATTCTACC
TAACTCAGGTTGAGATTGCTTTANAACCTATCATTGGCTTTAAATGGTCCACAAAAAA
CACCTCATGGTCACACTTAAA

Sequence 444

ACNGNCAGGTACCAAGATTAAGGACAGAGTTCCTCCATTGGTCATTGATTTGNAAACCA
AAATGTATCTGTGACAGGTATTAATCCGGACGCGTGGTGAAGACGAAAGGACACGAGAA
ATANGGACCTANNCCGCTCTANAACCTAGGNATCCCNNNNCTGCAGGAATTCGATATCA

Sequence 445

Sequence 446

Sequence 447

Sequence 448

Sequence 449

Sequence 450

Sequence 451

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGAGGTACAAGCTTCGACCCACGCG

TABLE 1
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TCCGATTATACCCCTAAAAAAGTAGAAAGATGGAATAATTAGGAGTAAAATTAGTGAAATG
GAAAGATATGTTATAGAAAGGACCAAGAAACGCAAAAGTTGGTATTTGAAAAGACTGAAA
AAATTCATGAACCTGTGAAAACAGTGGTCAAGAAGAAAAGAGAGGCATATTTTGATCTCT
GTTTTACATGTTACTCAATGTTTCATTGCTGCCTCCCTTGCCATAAAGTGCCTTTAGTGT
GTATGTTACTTTAGATTATCTTGGTGTCAAGCTTTACTCAGCAAAGAACCACCTTTGT
TGTCTACTTTAAACATAAGTTATCTTTAAAGAATGGGTATCTTTTATAGTTCCATATT
AATGGCGAAGAACTGCAGGTAACAGTGCCTTACCAGCTGGGTTTTGCTAACTTTTCTC
Sequence 452

CCGCGGTGGCGGCCCGCCGGGCGAGGTTTTATTTTTTCTCTTTAAAAAATAATTTG
GTTTTGAATATTAATTTACATATTTCTAAGTTAAATCAACATTCGTAGAGGAATTATCA
AAAAAACTAGTAAGTCTGAAAAAAAACCATATTTTATATTCTGAGGTCCCGGACGCGT
GGGTGGAAGCTTGACCT
Sequence 453

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCAGGTACCCAACACAAACTA
TTCAATAAAGTAATCTGCTTTAAAAATAAAACACACTGAAAGGCCGAGGCAGGTGGATCA
CCTGACATCATTAGTTCAAGACCAGTGTGGCCAACTGGTGAAAATTAGTCTCGACTAAA
AATCAACATTAGCTGGGCGTGGTGGCAGGCGCCTCTAATTCCAGCTACTCAGGAGGATGA
GGCAGGAGAATCACTGAAGCAAGGAGGTGGAAGTTGCAGTGAGCTGAGATCGTGCCATT
GCACTGCAGCCTGGGCAACAGAGTGAGACTCCGTCTCAAAAACACCACCACCAACAAAAT
AAACACAACAGAATTATTCTGCAAATACAGATATTGGAGTAGCTGAGTTCCATCTCAAAT
TTGACTATGCAGGTTGACAGGTGATCTTGGCAAACACTTATCCTTTCTGAAGTTCAACT
TTTTACCAAATGGTATTGGGATACAACACTTGCTCTTGCCATCTCACATGAATTATCC
ATTTTGGACAACCTTGGTAAACTATA
Sequence 454

CCGCGGTGGCGGCCCGAGGTCCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTG
AGGAAAAAAGAAGGTCCTGAAAGCGTCTAGACAAAAAAGACTACTTGTAAGTTGCAAGA
ATCAGAATGGCATTGGACTTCTCAGCTTTCTCATTAGAAGTTAAGATCTGAAGCAATCT
TTAAACTCGTGAGGAAAAATTAAGTCTAATAAATAATTTTCTTCTTAGCCAAACAATCAA
TGTGAAGCTAGAATAAGCATTTTCAGGTAAAAAAAAAAAAAAAAAAAAAGT
Sequence 455

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCTACAGCATCCTGATAA
CAGCCTCTGCCCTGGGAAACAGACTGTGACCATGCATTTCTAGTCCAGCATATCCTATCA
GAAGACCAAATGGCTTCATCAAAAACAGAGTGACAACCTCTTCTCTTTGCCTCTTCTGTG
CTTGTTAACAGGCAGCATTGGGGCAGGAGAGCCTGCAGGCCTTTACGGCTGCTTGAGTT
CTCACCTGTTTGTCTGAGCTCTGATTCCTCTGCCCTGTAAGCGTAAAGGAGATGTGCTGA
GTGGAAAGACCTCTAAACAGGCAGCCAGGAAGCCAGATTTAGGTCCATCTCTGCCTCTA
ACTGGCAGCTTTGCCTTGGGTAAATCATCAAGTGGGCAATAGTTTCTCTCCTGTAAAAGG
AAAAGATTGGGTTTAAGATTGTTTCTGAAGTTCTCTCTAGATTTAACCTGGAAGGAGTTG
AAATTGCTAACC
Sequence 456

CCGCGGTGGCGGCCCGCCGGCAGGTACAACATTTTACATTTCCAGGGACTGCAAAAATGT
TAGTTCCTTCCCCCATCATTTAGTTTGAAAATTCTTAGATAATTCTTTGCTGGTAAATTC
CAACAGAATAGTTAGCACACAGGTTCCACACACACAAGTTCTAGATAGGAATCTGAAGCA
CCACAATGAAAAGAACATTTAACATCTTTTAAAAATGTTTAAATGTTATCAGAAAGATGTT
TGGTATATGTGTTCCATGCATGCTCCTGCTGGTTCTATTTGAAAAAGAAGTTTTTACAGT
TATCTGTTGTCACCATATTGTAAACGGACGCGTGGGTGGAAGACCT
Sequence 457

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCAGGTACAATAAATAGCA
TTCCCACGGTGACCACAAGTCTTGAATCAGTTCCAGGTGTCGTGCGTGGCCGTTGACACC
GCTGCCTTCTGACGGTAAATGTATTGTAGAATTCATGTTGTATCAGGCTTCAGTTTCCTC
ATTCTAAAATGAGAGGATTGGATAAGTTAGTAGTTTCTAATTTTTACTTTAATCAGTGG

TABLE 1

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CATCTCCCATTTATTTTTCATTTGAAATAAAACTTTTGAATTTTATCTTCTACCTAAATA
ACATATTTTGTGTTTATGTTTCAAGATGAAGCTCACACTGAGTTGGAAAAAGGAAAAAGC
AAAGGATCAAAGCTGGGGGAAAATACTGGACCATGTGCTTCACCTCATGGTGCCAAATAA
AGAGAAAATGGGGAGAAGATAGGGACAGATAAAGATCTATTTGCTCGGATTGNGCTCTCA
TCCTTGGAACATGTTGACAATGCCCTGGAAATA

Sequence 458

CCGCGGTGGCGGCCCGAGAGCTCCAGGACGAAGGTATAAACACAGCAGAGGGCAGAGCCT
GATTTCAATCAGGGGCTACTCTAAGAAAGGCAGGAACTAGATAAATACATTTAAAAAGAA
ATTCCTCAGTGGCAGGGACAGTAGAGCAGCAGGGGAGATCCCAGCACGGACAGGTAACA
GTGTGATGTGGCAGAAAGGCTTTGGTTGCAAGTGGAGAACAGATGTCTCTGGCTGCCTCT
GGCAGCTGCCTCCTTCTGGGCCTTGACTTTTCAAAGCCAGGCCAGGCCTCCCCACCCTG
GACCACCTGTAGCTGGTTCAGAAGGCCCCAGGCTGGGCTTCATAGATGAAGACACAGCTG
ACTCAAGTCTCTGGCTCTGTGCGCTCTTGCCACCTTGCCGCTCCCATACCGGTGTTTCT
CAGGTCAACCCCTCTTCTCCATTCTACTTCAATGACCTCAGGTCAGGCCCTTGCCACTT
CTCTTCTGGACAAAGATGACAGCCCTTCACTGGTATCCTCGTCTNCAACCTAATTTATNC
TTCACAGTGCTGGCAGAAGTGACATCTTTTAAACACACAACGACCCCN

Sequence 459

GCGGCCGAGGTCCGCACTTTTTTTTTTTTTTTTTTTATTTTACTCCAGAATTTTCCTTTA
ATATTTAGGACTCCAATCTTTACTTACAAAATAGCTTTTATTTACGTGCACATGATCGTG
GTTTCAAAATTTTCTAAGCACTATGCTAAATTTGTCATCAAAACATAACAGATTCCCATC
TTACAAACATAGTTGCTAGTTGAATGAGTAAAGAGATTTCAAATTTCAATTCAAGGAGG
CATGTCTAAAAGACCAGACCATTCATTTGATGAAATTGTAAATGCCGATCATCCAACCTA
ACAGGAAGTGCACATTTGTTCTTTCTAGTTAGAAAAAATAA

Sequence 460

CCGCGGTGGCGGCCCGCCCGGGCAGGTCTTCGACCCACGCGTCCGTGATTGCCTATTGTT
TGTTGATTGACTGATTTATGCCTCTAAGAGGAATCTTTTGATAATATTAATAAGAT
GTCCTAATACAAAAGTATAGAGTTTCAAGAAATAAAGAATCTCCTGGCCAGGCGTGTTG
GCTCAGCCCTTTAATCCCAGCACTTTGGAAGGCTGAGGTGGGCGGATCACGAGATCAGGA
GATTGAGACCATCCTGGCTAGCATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAATA
TTAGCCCGGTGTGATGGCGACCT

Sequence 461

CGCGGTGGCGGCCCGCCCGGGCAGGTACAGAAAGGACAAATACATCAGTAGAAAAAGAAGA
CAATATAAGGGCAGATTGAAATATATACGTGAACGTACAAAAGACCAATTACTGCCATTT
CAATTCAATGAGGAAATAATGATGTATTTAATAAATAGTGCTAGAATGCTGCATTATCTG
TCTAGGATGAAAAAAAAAAAAAAAAAAAAAGT

Sequence 462

CCGCGGTGGCGGCCCGAGGTGGAATGTCTGTTTTACAAAATTTTGTATTTTCTCCTAAT
AGTATGAGGTNGAAGAAATCTACATCTTCTCAAGTGAGCTTATGATTAAGTCTGATGAGTT
TTCTTGCTATTCTCAAATCGGAATNTCCAGACCTGGCTAGAACTAAAGTCTAAGCCCAT
TCATTAAGTCTTGAATTTATTTACTTTNGCCAAGAACAGCTATATAAAATTAGATTCTT
CCTGGTATAAAATTGGGTGTTTTCTTAGATATTNGCTATCAAAAGTCATTTTCTTGAA
ATCGGACGCGTGGGTNGAAGCTTGACACCTGCCCGGGCGGGCGGCCGCACTTTTTTTTT
TTTTTTTTT

Sequence 463

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACTGAAAG
CATACAAGTGAAGGTTTACGGATTTCTAAGAAATGCATTTCCCTTGTCTATGTTTCATCAG
CCTTTAATACTTTGGCTACAAGGCATATCAGAGAAAGGGAGGTAAATTGGGTAATGACA
AAAGAACATATGTAAGTCTGGAAATAGGAAAAATGTTCCAGAAATGGGATCAATGTGCCA
GCAATAAGCATAGTTTCAATTTCAATTTGAAATTCAGTTAAAGAGCCCAATAAACAGTTCCA
AACCGGACGCGTGGGTGCAAGACCT

Sequence 464

TABLE 1

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ACTATNGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTCGACTCAAGCTTTCAG
ATATAGGGCATTCCAGAATCTTCTCTTTACGAGTTCACCTGCTAGTATAATCTCCACAAC
TTGAATGGCATTGGTTGTTCTGTAATTCCTGCCAAAAGCATCACAAGTTGTACCTGCCCCG

Sequence 465

CCGCGGTGGCGGCCGAGGTAATAGCTAATGCATGCAGGGCTTAATACCGAGGTGATGGGA
TACTTCATGCTAACTGGGTGTTCTTAGTGTAAATAATTGACTGCCTGCTCCCATGTGGCC
TCACAGAGTCATAGCTTCTTGCCCCAAATGTTTTCTGGTTTTCTGTGGAGCCATACAGA
ACCATAAAGAGAAGTTGTTGAGAAACCGGTTTGACTTTCAAGTCTGATGAGGAGCCTGGT
TTCCATGAGATTTTCAGCTAAGTTAGCATATTTTAAAAATTTCAAATGAACAGAGGAA
AGGTTGACGATCTTTAGAGCCTTCTGCCAGGCTGAAGTGTTCGCATCTTCCCTAGACCC
GGTACCTGCCCCG

Sequence 466

CCGCGGTGGCGGCCGCGGCCGNCAGGTTACAAGCTTCGACCCACGCGTCCGGGAAATTTTA
ATTAATAAGGTGAACATTTTAAATGACCTAATACATATTTAGTCCACATTGAACTTT
GGCATTTTGTCAATTGCCATTAAATTTTGATGGCATTAAATTTGATGCCATTAAATTT
TGAT

Sequence 467

CCGCGGTGGCGGCCGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGTGATAACTTCTC
CTAAGTGCCAGGCATTGTATTACATGCTGGGAGCACAAAGATGAATAATAACAATAGGTT
CACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCAGGAGCCCTCAGCGTAGTAG
GGGGTTGGTGTGGAGGGTTGGAGGAATGGAAAAGGCCCTGAAATGCAGGCAGAGAAAATG
ATGAAACAATTCAGGGGCTGTGGTGAGGTTAAATGAATATCTTTACAGCAGCCTCGAAGA
CTGATCAGGTTACTATACCTCTCTTCTGTCCACGTGCATTTT

Sequence 468

ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCACAACATTCCCCCTT
CCCCAACAGTAATATGGACACTGATTTAACAAGACTTATAAAAAATAAGGCACATTTA
TTTTGATATGGTAATTTTAAATAGAAACCCCTTCTCAGAACACCTGTATTCAAATGAGC
TGTGTAAAAAGACACCTTGTGGTACCTAAAATAGGTTTATGGTACCTATGGAATTGCTTC
TATTTTAGTGAAGATGGAATAAATTGCACCCATCCACATTGTCAAGTAATGAAAATATG
CGGACGCGTGGGTGGAAGCTTGACCTGCCCCG

Sequence 469

GACCTCTTTAAGTGAACTTAGTATGCTAATAGTATGATACGCCCTTTTGCTGTAGCAGT
TACCATAGTTACAGATAAGTATATATTGTTGTGATGATCTGATTTTCTGGTTCCCCCACC
CCTGCAAAACAACAACAAAACCTTTACCAGGCTCTATAACAGGGGGACCAAACCTTGTTT
TTGCTCATCATTGCCGGACGGTGGGTGCAAGCTTGACCTGCCCCG

Sequence 470

GCTCCCCGCGGTGGCGGCCGCGGCCGGGCANGGTTACAAGCTTCGACCCACGCGTCCGGGAA
ATTTTAATTAAAAATAGGTGAACATTTTAAATGACCTAATACATATTTAGTCCACATTGA
AACTTTGGCATTTTGTCAATTGCCATTAAATTTTGATGGCATTAAATTTGATGCCATTA
AAATTTTGAT

Sequence 471

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCCGGGCAGGTCAAGCTTCGACCCACGCGT
CCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCACAAAGATGAA
TAATAACAATAGGTTACAGAAAAGATGAATTGATTGAGAGAAAAAGAACCCTCCAGGAG
CCCTCAGCGTAGTAGGGGGTTGGTGTGGAGGGTNGGAGGAATGGANAAAGGCCCTGAAA
TGCAGGCAGAGAAATGATGAAACAATTCAAGGGGCTGTGGTGAGGTTAAATGAATATCTT

Sequence 472

ATTGGAGCTCCCCGCGGTGGCGGCCGCGGCCGGGCAGGTACAAGCTTCGACCCACGCGTCCG
GAGCGTTGCTTGGATTTCTAATTACTTCTAAGNGTAGTTTTATTTAATTTAGTCCTTTA
GAAAAANAAATAAANNAATGTGCGGGCCCGGCCTGCCCGGGCAGGTNCCACNCGTT

TABLE 1
80/467

CGAAAAAGAAAGAAAAAAACTTTCTCTTGCCANTTCTTCTTCTTCTTNTT

Sequence 473

CTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTT
TCCTTTTGGAGACACAGTCTCACTCTTGCCAGGTTGGTCTAAACTCCTGGGCTCAAGCA
ATCCTCCCGCTTTCAAGCTCCCAAAGTGCTGGGGTTACAGCCGTGTGCCACTGTGTCTGG
CCCTTTTCTTTTCATAGGAGAAGGGTTGTTGACTCCAGGAAACGTACCTGGAACCA
GAATGTGAAGTCAAGGACCCCGCCTGTTGGCAGCTGCATTTACTTGAAGTCTGTTCACT
GTTTCTTAGCCTTGCTTTCTCTCTGCCAGTTCTAGGGGACACTGCTTCTCTGGTTG
ACCTCATCAATGCCCAACC

Sequence 474

CCGCGGTGGCGGCCGCCGCGGCGAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGT
CATCTCAAATTTCAAGCTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCT
TGAAGATTTACTTTGTATACTTCAAAGATCTGGTCATGAAATTTTAGCTAATACATAA
AGTGCCGAATTGAAATCCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACC
AACCCATTCTACCTAACTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAATG
GTCCACAAAAAACACCTCATGGTCACACTTAAATAGTTTGCATCCACACTACAGGCT
TCTCTGGAGGATTTAATACTTTGGAAGTAGCATCATAAG

Sequence 475

CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGACCNGTGCAAATATCTACCCA
GTTAGAAGAGTAAATACCATCTTAGTGTTATTATCAAAATATTCTGAAGTCAAGACCTC
CTCAGACTGTTGCTGGGACTCCCAGATATCAATACTCTGAGAACCACTGATCTAATGTTT
CTTTAGTCAGTTTCTATTTGTTCTCTAGTATAACCAAGCATAAAAGTAATATACTTCCGC
CTCTCTCTCCCCCACTGACTTTAGTCAATAGTACCT

Sequence 476

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAACGCTTCGACCCACGCGTCC
GGTTTGGGTGGAATTATAATATTTTAGATAAGATTTAAGAGGATTGCTAGATNGGAATGC
GAATGATGATAAGGCTTTAGAGTTAGATAAGAGAGAGGGCGCTCTAGAACTAGTGGNTC

Sequence 477

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAACATTCCCCCTTCCC
CAAACAGTAATATGGACACTGATTTAACAAGACTTATAAAAAATAAGGCACATTTATTT
TGATATGGTAATTTTAAATAGAAACCCCTTCTCAGAACACCTGTATTCAAATGAGCTGT
GTAAAAGACACCTTGTGGTACCTAAAATAGGTTTATGGTACCTATGGAATTGCTTCTAT
TTTAGTGAAGATGGAATAAATTGCACCCATCCCACATTGTCAAGTAATGAAATATGCGG
ACGCGTGGGTGCAAGCTTGACCTGCCCC

Sequence 478

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGCGGCAGGTACTTATACTAGAA
GATGCTCCAAGGTTTCAGAAAGGAATTAATTACTTTCAATTTGCACAATTTAGAACAAAT
ATCTGGCTTTTCCCTAAGCTTAATGATTTTCCATTTACACAACCTAAAATATAATAGCAT
TATTTTATAATCAAGTTTAACTGATGGTCTATGATAGTAGAGCGATTTAGTATTTTGACA
AAAATCTTATGAGACATGAAGTCATTCAATTTGCCGGACGCGTGGGTGCACTCAAGCTAG
ACCTN

Sequence 479

TTAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCTTT
CTTTTGTGTTAAGGGCCCATGACCTGCAGTTTCCCTAACATTCATTTTTATACAGGGCA
GAGGTATGTGTGCGAGCTCAGATACCTTAAATTCATATGCCTTTAATACAATCCAGGCAG
ATTTCTAAATGAGGGATGCTTCCCCACAAATGGAGAGTGAAAGTGGGCCAGCCTAAAAGG
ACCTCCATAGCACTGTGCATGGCCAGCTGTTTGTGGCTGTACCTGCCCC

Sequence 480

ACTACTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTC
CGCTTCTTTTGTGTTAAGGGCCCATGACCTGCAGTTTCCCTAACATTCATTTTTATAC

TABLE 1
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AGGGCAGAGGTATGTGTGCGAGCTCAGATACCTTAAATTCATATGCCTTTAATACAATCC
AGGCAGATTTCTAAATGAGGGATGCTTCCCCACAAATGGAGAGTGAAAGTGGGCCAGCCT
AAAAGGACCTCCATAGCACTGTGCATGGCCAGCTGTTTGTGGCTGTACC

Sequence 481

GACCTCTTTAAGTGAACTTAGTATGCTAATAGTATGATACGCCCTTTTGCTGTAGCAGT
TACCATAGTTACAGATAAGTATATATTGTTGTGATGATCTGATTTCTGGTTCCCCACC
CCTGCAAAACAACAACAAAACCTTTACCAGGCTCTATAACAGGGGGACCAAACTTGTTT
TTGCTCATCATTGCCGGACGGTGGGTGGAAGCTTGACCTGCCCG

Sequence 482

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATTGACTAAAGT
CAGTTGGGGGAGAGAGAGAGGCGGAAGTATATTACTTTTATGCTTGGTTATACTAGAGAACA
AATAGAACTGACTAAAGAAACATTAGATCAGTGGTTCTCAGAGTATTGATATCTGGGAG
TCCCAGCAACAGTCTGAGGAGGTTTATGAGTTCAGAATATTTTGATAATAACACTAAGAT
GGTATTTACTCTTCTAACTGGGTAGATATTTGCACTGGT

Sequence 483

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGCAGGTCAAGCTTCGA
CCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCAC
AAAGATGAATAATAACAATAGGTTACAGAAAAGATGAATTGATTGAGAGAAAAAGAACC
CTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTGGAGGGTGGAGGAATGGAAGGC
CCTGAAATGCANGCAGAGAAATGATGAAACAATTCAGGGGCTGTGGTGAGGTAAATGAA
TATCTTTACAGCAGCCTCGAAGACTGATCAGGTTACTATACCCTCTNTTCTGTCCACGTG
CATTTNAAAAACNTTGGCCGNTCTAGAACTAGTG

Sequence 484

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGATGGTTTTTGCAAAAATTGAAAA
TGCATCGATATTACAGTTAATTTTTTCAAGTGTGTATGTGGTATTAGGCTTAGAACTATAA
CACAGGAAGTTTTTAGAGTATGTCCACTCTGGTTTACTCCTTTGTAAGTATTAATACCTG
ATAATTTACATCCTACAGCCCTGCCTTTTTTTTTTTTCAAGTTTGTCCCAGCAAGTCTT
GGCCCTTTGCATTTTCTTAATACATTTTAGTACCTGCCCG

Sequence 485

CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGCTT
CACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCTCACGAGT
TTAAAGATTGCTTCAGATCTTAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCATT
CTGATTTCTGCACTTACAAGTAGTCTTTTTTTGTCTAGACGCTTTCAGGACCTTCTTTT
TTCCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTGGGTACCT

Sequence 486

ACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCGAGGTGGAGGCCCAAG
TGCTGAGACTCAGGGGACGCAGGCCTGAGGACAGTTATGCAGGGTGCAGCGGCCTACGGT
AACCCATGTAGCAACAGAAACCCTTAGCTAACTGCCGTAATTTAAGGCAATTAGGAGCCA
TTCATCATCCAGATGGCTATTGGCTCTAATCGTTACTGGCTGAAGGAACTATATATAGCA
GCTACCTTTCCGCTCCATTCCCAGGCCTTGTTCTGTCTTCTGGTTGCCAGTTCTGCACT
CACTCATTCCGGACGCGTGGGTGGAAGACCT

Sequence 487

CTATNGGGCGAATTNTTNTCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACGCGTCCGA
TCACTTTTTTATTNATACCTTATTAGATAAAACATTAGCCCCCTAGAGTGTTTTGTGAA
GGAAATATGCCTAATAAGAGATGATAGTTTTAGCAATAAATGAGCATTAGAACTATTATT
TATTAATGAAATGAACTGGTGGTCTGAAAGTGATGATAAACAGACAACCTGTGGAAAATGA
ATTATTAATAATTCATGGAATTCCTTTTGAAGTTTATGAAGT

Sequence 488

CCGGGCAGGTACAAATCAAGTCATTAACATTTTCAATGTCAAAAATACAGCACGCTGTTA
AGAGTTCTGTGCTAGTGCTCATTATCCCCTAGATCCCAAAAGGGCAAACCTCAAAGATGA
AACAAAGGCAACGCCATCAATAACCACCATATTCCACAGGCTTCTCCCCTAGGACGTAC

TABLE 1
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CTN

Sequence 489

CCGCGGTGGCGGCCGCCGGGCAGGTGGAAAGGTGGGTGGGGAGAGGGAGGCTTATTTGT
TGCTGCAGTGTAAGTAACTAAGTAAACCTAATTCATATGACTCAAAGTATATTTGGT
AGATCTAGGTGAGTTCTACTTTAGAGGAAATCCTGGTAACTGTTGTTTGTGTAAGTTA
TAGCTGTAATTAATTTTCCCTGTATTCAAAGCCCCAAACCCTGCATTCAGATACTATGC
ATTTAGACTTCCTTAGGCAAAGTCAAGGCAACAAGCTGATGATTCTAAAGCTATTNTTCA
AGGGAGNTNTTTACCCATCATAAAGGNGGTTTTAGTCATTATAGATAATATTCAATCAA
TTANTACCGGGGGATGGCAAAAA

Sequence 490

CCGCGGTGGCGGCCGAGGTGTAATTTGGAGAATATTTAAAGCAAAGAGCAAACAACAAA
AACTAAGTTAACTACTACCCAGTGCAGTAAGGGAATTGTAAGATACAGCCTGCTTAAGGA
GGTCTGCAGACAGATGCACCTAAGATTTAGCTGTTTTAGGTCACTTTTCTCAAAATATT
TATTATCTGGCAATGGGGATGGGAGTGGGGAACACCTNTCTGTGAGGCAATGGTATCTC
AACAAATACCGACTTTTCAAGGAAGAAAGCTCTCCACTTCTCTCATAAACTTATATACTA
CCTTAAACAGTATGCAGTATTCGCGGACGCGTGGGTGCAAGCTTGACCTGCCCCGGGCGGC
CCGCTCTAGAACTAGGTG

Sequence 491

CCGGGCAGGTACAGCCTCACATACACAGATGCAGGTGAAGTCACCAAAGCTGATCTCTCA
TTCGTTCTGGGGACAGTTAGCAGCGTAGTGGTCCCACTGCAGCAAAGTTTGAAATTCAT
TTTCTTCAGGAAAATACCCAGCCAGTCCCTCTCAGTGGAAACCCTGGTTATGTGCTGGGG
CTCCCATTAGCTGCTGGATTCCAGCCTCATAAGGGTGGAGCTCTCCCGTGTGAGCTCGTA
GCACAGAAGGTGAAGAGCCTGCTGTGGGGCCAGTGCTTCCAGATTACGTGGCCCCTTTT
GGAAATCCCAGGCCAGGGACATGCTGGACTGGGTGCCCATCCACTTNATCACCCAGTC
ATCAACAGGGA

Sequence 492

CCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCAGNTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTATGCTTGGTTATACTAGAGAACAATAAGAACTGACTAAAGAAACATTA
NATCAGTGGNTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTGATAATAACACTAANATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT

Sequence 493

ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGA
ACATCTTGATTTACAAGGGACAAAATGATGCAAATTATATGCTGTCCAACCTACTGGTGA
ACTGGATCAGAATGGTCCAAGGACTGTAAACAGAGGAAGTATTTACATTTTGAAAACCT
GCGGACGCGTGGGTGCAAGCTTGACACCT

Sequence 494

CCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGAACATCTTGATTTACAAGGGACAAAA
TGATGCAAATTATATGCTGTCCAACCTACTGGTGAAGTGGATCAGAATGGTCCAAGGACT
GTTAAACAGAGGAAGTATTTACATTTTGAAAACCTTGCGGACGCGTGGGTGCAAGCTTGTA
CACCT

Sequence 495

CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCCTAAAA
CTTAAAGTATAATAAAAAAAGATTATTTCTATACTTCAAATCAACAAGATTTGATTG
CATTTAAATTTTCTGTCCATTTGTTCTTCTATGTAATACTTTAAAAATAATTGGCATAA
AAATTCAATCAATTCATAAAAGTCAAAGCAAAAAAACAATCTACTGACATNTCTTGA
GGAAGAAATGATCAGGATTGACATTAATGAACCTCTCACAGAGACCACTACACACACAC
ACAAAAAGAAGGATGGGTGAATGGATGCAGAGAGAATTTAATAAGACTGAAATGATGCCA
TACATGCTTTTAAAAAATAAAAAGTATTAATTTTAAATTTTACTTCAATATAAGAGAAA
AAAAAAA

Sequence 496

TABLE 1

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CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCGA
CCCACGCGTCCGTAGTAATAGGGAATTAAGTACCCCTTTTGGATGGGGGAGAGCATCAG
GCTGGGGTCAGGTAAGTGTAATGGCCTTCTGAGCATGCTCTTCTAGGCTGACTCCCAGC
CCTGACTTGAAACCATTAGCGCTAACTTGCTCTGTTTTGAGAAAACTTTCCAACTTTT
GCATGAGAACTAGAAAAAGGAATGTATGCCACGTAAGTGGATTACAGAAATGAGTTAAT
TGTCTCTGTGATAAAAAAATGAAATATTTTCTTATTGAATTAATATTTTGTCTTGA
AGCATTTTCTAGTGATAGAATGTATTTGTCTTTTTCTGGGGGNACCTCGGCCGCTCT
AGAAGTAGTG

Sequence 497

CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCCCCAGGT
AGCACTTTGAACACTTGAACATCTATGAAATCACATAGTAAAGTGATAGGAGATGGGGCT
AAGCTTTTAAATGGCCTTAGACATAGCATTAGACATAACCTAAGCTGAAAGGCTTTGGGA
AGTTGTTGTGTTAAATCCCCAACACACTCTCGTGTTTTCTTAGGACTTGCCTNTTATTTA
AAAAAAAAAAAAAAGTTGCGGCCCGCTCTAGAACTAGTTGGATCCCCCGGGCTTGCAG
GN

Sequence 498

CCGCGGTGGCGGCCGAGGTACCCTTTTATAAGGGTGTATCCCCTTTTGGTAACTTACTGT
TTGTTAATTTGTAGTGTTCCCTGCCAGTAAGCTTGTAACACTCTAGTGACTCACCTTCGG
GTGGGAGGGTAGGAAAGGGAGAGGCCTGCCTCCTAAACCTGGGAAGATGGGGAGAGAGTG
GTAAACCTGAGAGCCCCAAAAAACAAACCAAAACAAAAAAGT

Sequence 499

AGGTACCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTGAGGAAAAAGAAGGT
CCTGAAAGCGTCTAGACAAAAAAGACTACTTGTAAAGTTGCAAGAATCAGAATGGCATTG
GACTTCTCAGCTTTCCTCATTAGAAGTTTAAAGATCTGAAGCAATCTTAAACTCGTGAGG
AAAATTAAGTCTAATAAATAATTTTCTTCTTAGCCAAACAATCAAATGTGAAGCTAGAAT
AAGCATTTTCAGGTAAAAAAGT

Sequence 500

CCGCGGTGGCGGCCGAGGTACTATTGACTAAAGTCAGTTGGGGGAGAGAGAGGCGGAAGT
ATATTACTTTTATGCTTGGTTATACTAGAGAACAATAGAACTGACTAAAGAAACATTA
GATCAGTGGTTCTCAGAGTATTGATATCTGGGAGTCCCAGCAACAGTCTGAGGAGGTTCA
TGAGTTCAGAATATTTTATAATAACACTAAGATGGTATTTACTCTTCTAACTGGGTAGA
TATTTGCACTGGT

Sequence 501

CCGCGGTGGCGGCCGCCCGGGCAGGTGAGGAGTGCCCAAAGATTTCCCAAGTCCAGCCC
AGAGAAGCTGAAAGCCTTTCCCCAGGTGTGGGGCTGAGTTAGATGTGGGTCATAAAGGA
TGTGGCCTCGAGGCTGGGAGGCAGCTGGGCAAAGTGGGAAGCCTCCCTACTCCTGAGACA
GTGATGGCTCAAATCCAGGCCAACCTGGAACATGATCCTCAACTTCTTAAGTTCACCTT
TCCCAGGTGTGAAATGGGTTGTTCTGGGAATTGAGTGAGCTAATGATACACTCCCTGGCA
CACAGCGAGCCTNAAAACGCTTGTGTCCCCTCCCTACCTCACAGCCCATTTTAGAAGTTT
GCTGTCACTTA

Sequence 502

GACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTTTTCTTA
TGAGTGGGAGGTGACTGATCGTGGAGGTGGATTTCTTATGAGTGGGAGGTGACTGATCGT
GGAGGTGGATTTCTTATGAGTGGGAGGTGACTGATCGTGGAGGTGGATTTCTTATGATTG
GCTTATCACCATCCCTCCTTGGTGCTGTTTTGCAACAGTGAGTGATTTCTTGTGAGATC
CGGTTGTTTAAATCCANAGGCACCTNCCCCTACCCTCTAGCTCCCATTCCTGCCATGTAA
GACACCTGCTCCCCCTTTTCTTACCCCATGATTGGAAGCTTTTGGAGCCTCCCCAGA
AGCTGATGCCAGCCCTATGCTTCTGCACAGCCTG

Sequence 503

CTACTATAGGGCGATTGGAGCTCNCGCGGTGGCGGCCGAGGTTTTTGAATGCACGTGG
ACACGAAGAGAGGGTATAGTAACCTGATCAGTCTTCGAGGCTGCTGTAAAGATATTCATT

TABLE 1

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TAACCTCACCACAGCCCCTGAATTGTTTCATCATTTCTCTGCCTGCATTTTCAGGGCCTTT
TCCATTCTCCACCCTCCAACACCAACCCCTACTACGCTGAGGGCTCCTGGAGGGTTCT
TTTTCTCTCAATCAATTCATCTTTCTGTGAACCTATTGTTATTATTCATCTTTGTGCTC
CCAGCATGTAATACAATGCCTGGCACTTAGGAGAAGTTATCACGGACGCGTGGGTCTGAAG
CTTGACCTGCCCCGGGCGGC

Sequence 504

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGCTTCGACCCACGCGTC
CGAAATCTTGGTTAAGGATTATTATAAAATAGAATGGTATTTTCAGTAAATCCCTGAGGC
TTAGGAGTCCAGGTACAATGTTGGTTCTCAATTAATATAAATCATGTCTAGGGACACT
TAGGAACACAGAACATATATTTAGAGCTAGAAAATATACAGCTTCAGACCAGGCAAAGTG
CTGGGATTACAGGCGTGAGCCACCACGCTCGTCCTCACATGGGGTTTTATTATTAGGATG
GTAAGAGTATTATAAGGGATTNGGTACAAGGCATAATGAGTCCTTTTGCTTTTAGGCTT
TTGACTTNTGGTTTTAAGACTTTTNTTAGCTTTTGTNGTTAGACANCCATTGGGCA
AGGCTTNGGTTTTTAATAAAGTTTGCTTGGGATNAAACNTGACCTTAATGGAAATTGTC
CCCTNCCCCAAAA

Sequence 505

CCGCGGTGGCGGCCGCGGCCGAGGTACTACTGATACAAATAGCATGGATGAAACTCAAA
ATCATTATTCTAAGAGCCAGATACTATAGCCTGTATTTTATGATTCACCTTCAATGAAAT
TCTACAATAGACAGAACTATCTATCAACAGAAAGCAGATCAGTGGTTTTCTGCAGCCAGA
GGTATGAAAGGTTTGAAACATGTGGCACCAGTAGGACATATGGAACTTTTTTGGTGTGA
TGGAAGTATTTTTTATCTTGATTGTGTGGTGTGTTTATACAGTGGTATACATTTGACC
T

Sequence 506

GGGGCGGCCGCGCCGTTTCAGGTACACGTNTTNNCCAACCAATTTTATANGNATATATAT
TCTACTTCCAACACCNTNTTCATCCTGGTNCAATCAAAGCCTGGTTNTGGCCAACAANA
AACTCGTCAGGAGATCGAAGGNTGTAGATGTCTGCACGTGGCTTCCTTGGAGGTCCAGNG
GNGACTCCCTCTTCCAAAATCCATTCTGTACCCGCTGGCTGCTCTAACGGGCAGGACAAC
AGCGTATGAAGCCTGACTGCAACTAGGAGAAGTACCACACTCCCGGACGCGTGGGTCTGAA
GCTTGTACACCT

Sequence 507

GGCCGAGGNCAAGCTTTTACCCACGCGTTTGAANCCATCTGTTTGGNACCCNGAAAGGGG
GCAGGAAAGGCTGGGGTCCCAGNCCACCCTAAGGNGATCTGAGTGGCCAGGGCTNCAAG
NNNNCCACCTGNCCAATGGGACCCCTTCTGNCCTCACCTACAAGGGGCACAAAGGGAA
GACACCAAACCTGGCAGGAACCTTTTACGCAATCAAGGGAAGGAAAGGCANTCCTGGCAG
AGGGAACAGCANGCCAAGCGGGAGAAGGCTCAAAGTAAGGAGGGTAAG

Sequence 508

CCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGCTTTTCAATTTTATTGTAT
AGTTTTTGATAATGTTAATGTCTGAGATCTTTATGGGTGAGTCTGCTGTCATTTCTGCTA
TTTCTCGTAGTGATTTGCTTGTATGGTTTATGATTTTTTAAAACTGAATGTGTATTAGA
ATTGTGTCTGGTAATCTTTAGGGACCCATTGTAGATGTATTTCTTCAAAGAGCATTGT
GGTTATTATATTTGGGTGCTTGGGGCACTGCCAGTACCTGCCCG

Sequence 509

CCGCGGTGGCGGCCGAGGTATTGAACCAGGTCAAAACATTGTTGAATATCAAACCCAATC
TATTTAATCTGTAAGAAACAAGGACCCTGAGAAAGATTCTGACCAAGGGTATGTGATCGG
AAACTTGACAGATAAATGTAGTATACTTGTAAGCCATACTGTGAAAACTTGGGGATTA
TTTGAACACAAATTATCACCTGGAAAAAGACAGAAAACAAGGCAGAAGACTGTGCAAGA
GGTTGGAATATTCAAAACCTTCAGATTAGAAG

Sequence 510

CCGCGGTGGCGGCCGAGGTACCCAANNGATATCACTGTGAAGGTTTGGATACACTGACTG
AGGAAAAAAGAAGGTCCTGAAAGCGTCTAGACAAAAAAGACTACTTGTAAGTTGCAAGA
ATCAGAATGGCATTGGACTTCTCAGCTTTCCTCATTAGAAGTTTAAGATCTGAAGCAATC

TABLE 1
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TTTAAACTCGTGAGGAAAATTAAGTCTAATAATAATTTTCTTCTTAGCCAAACAATCAA
ATGTGAAGCTAGAATAAGCATTTCAGGTAAAAAAAAAAAAAAAAAAAAAGT

Sequence 511

CCGCGGTGGCGGCCGCGACACGCTTGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCG
TCCGAAATTAATGAAATGTTTTACATTCTTTTAAAAACCTTTGAAATATGGTGTGTATTT
TATGCTTTAGCAAATCTCAGTTTGGACCATTTCAGGTGGTCAGCAATTACACATGGCTAG
AACTAAGAGCAATCAGTTTTNTTCCACAGTTTTTCTAAAATTTTCTTGTCAAAAATCTTG
ATGGTATGAATTACTCTTTTAAAAAGTGCACCTTNACCAGCAACAGAAAANAACCCTGGAG
GGGTATGGGTTTTAAAGCTGGTACCTNGGCCGNTCTAGAACTAGGTG

Sequence 512

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCCCAAAGTGCTGGAATCA
CAGGAATGAGCCACCACACCCAGCCAAATTGGGCACAAATTTAAAAATTTGACTTTTATTA
ATGATATGGTAAAGAGATCTAGCTTGGTCATGACACCCTTGTGTTATACGGTGACAGGCA
AATCATTTAAAAATATCTAACTATAATTCCTGTAGTTCACATGAATTGGATATTCTGA
AGCGGACGCGTGGGTCGACTTGTAACCTGCCCCGGGCGGCN

Sequence 513

CCGCGGTGGCGGCCGCGGCCGAGGTACAGAAAGGACAAATACATCAGTAGAAAAGAAGA
CAATATAAGGGCAGATTGAAATATATACGTGAACGTACAAAGACCAATTACTGCCATTT
CAATTCAATGAGGAAATAATGATGTATTTAATAAATAGTGCTAGAAATGCTGCATTATCTG
TCTAGGATGAAAAAAAAAAAAAAAAAAAAAGT

Sequence 514

CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTCACTATAGGGATCT
AGATCACGAGCGGCCGCGCACTTTTTTTTTTTTTTTTTTTTCTGCCACCTCTTTC
ACTTGGGAATCTATTTTCACTGCTCTCCAAAGTTTTGAGAAGGCAATAGTCCTGGAAAAT
GGGTCTGAGCTCCTCTCAGCAGTCCTGCTTCTTCCACCTGCACTGTAAGGNGACCCT
AACTGGGTCTAAGACAAAAAGTCGGACGCGTGGGTGCAAGCTTGACACCTT

Sequence 515

CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTTAGTTACCACTTCA
TTACTGGAGGGCACTGTCAAACTTCTGACTATCCAGACTTGAAGCTGGAAGCAAATAC
AAGTCTGAGGGGCTAAGCTGGGAGGTTCTGGCCTCTCCCTAGCTCTCTATGGCTCTAC
CTCTCTGCTTGAAGCTCCCTGCACTGCACTCCCACTTCTGACTGGGGATAGGACCCT
GCTGACAGGGCCCCACCTCAACTTCTTTCATTGCCCTCTTCCAGGAAATCCCACCCTGGG
ATACTTCAAAGACCTCATATGCTACAAAGATCAAGGCCACCTAATGAGTGCTCTAGAGAT
CAGCACCAAAGATGCTTGCCAGAGTCTTCTCTA

Sequence 516

ACACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCAC
GCGTCCGGGGAACCTTGTTCAAGTTCTTTTTAGGCAACCCAAGCCAAGACAACAAAGTA
AGATAGAGCCCCAAATGTGGTCGTATAAGGTTTTTCAAAGAAAGTAACACTTGAGTTAGG
TCTTAAAGTTTNACCTAAGAACTGCCAGGTGGACAAGAAGAAAGGGTGTTCAGTAG
AAATAATANCATGGACAAAGGCAATGTAGCAGGAAAAGTNTTCGTAAATTCAGGGAATTT
CAAGTGTTTCACGATGGAAGGAGCAATAGAGTCATTTACTTGCGGTGGCAGGGGATGTTG
GAAATGTAAACAAGAGTGAGATACAGAAGATTTTATGTGGCATGCCAACTGGGACTTTTT
TTTGTAACAA

Sequence 517

TCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGAGAAATACCATTTCACAC
GTCAATCACTTCTGACCAAGCTTATCAGAAAAAGGAGAAAAGAATGTCTCCCCACTAAAT
GTTCTAGGGNGGGNGAGGAAANCTAGGGTGGNTATCTAAATCAACAAATATTCTAGATAT
TCCAATATCTAAATFATTGTTGAAATACTCNTCTGAAGNGNTCATTGAACNCTAAAG
CAGGAGNACAGCNTTTGTTGTATCAANATGGGCAGGGGTTTTTAAAGGGTNTCCATTTTT
TNTTANTTTCCNCATTATTAATTCNTNTNAAATNNTTTTTAGGACCACAAAATTTTTCC
CNTTTCTTNGAGGTNTTAAAGGGGGATTTAANAAATGGGNNANNTGGGGGGTTT

TABLE 1
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Sequence 518

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGGTAGAGAAAGATTCAA
AATGCTGCTGTTCTACCTGAGATGGGAAAAATGAAAGCAAATAACATCAACAAAAACAA
ACAAACAGCCTTGTAGTTCCATGTCACTAGCCAGGGATTTAAGACCAGCCTAGAGAACAT
GGTGAGACCCCTTCTCTACAAAAATAAAAAATAAAAAATACAAAAAAGCTGGACATGGTGG
TGTGTACCTGCCCCG

Sequence 519

ATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATGCTTCGACCCACGCGTCCGCTCACT
TCATCCTCCCAGCAACCTATTATGATCCATTGCCACACCAACTTGCTGATGAGGAAAGTG
GGGCTTAAGGAAATTAAGAGCTGTTGTGGGACTTCAAAGCAGAAGACAGTAGGCTTTC
AGAAATTTGATAAAATAGCACTTTGCATTTNTTGAATCTTGAGCTAAATGGAAATTAAT
ACTAAACATTCTNCACTGGTAAAATAGAGAATAAGGATATTAACAGTAAAAGAAAAGAAG
AAGAAAAGGAAATGTGCTTCCACAGATTTAGAAACATAAGTAACAATCTAAGGTTAAGGC
TTTTGGCACCTGCCCGGGCGGCCCGCTCTAGAACTAGTGGGAT

Sequence 520

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCTTCGACC
CACGCGTCCGAGCTATGGACCTAAGGCAGCGAGTGGATTCAATAGTCCTCTTTCAGCTGA
ATGCATGCTACAGTATAAGAAAAAGCTGCTGCCTATATGAAGTCTTTGAGAAAGGTTTG
TTAGCTGCTGTTAATATTTAAATCAGAGGAAACATCAGGAGTCATTCTAGAGAATGGCAA
GAGTTTTCTGCAGTTTATATTGTTGACTTTTTATACGATATTGGGGTACCTCGGCCCGCT
CTAGAACTAGT

Sequence 521

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTTCGACCCACGCGTCCGC
TAGGAACTATGTTAAAAAAATTCAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACTTAGAACTTTGTGTGAAATAAGACTGGCCAGCATTAGAGGTGGGTTG
GCCATCAGAAGGAAGCCTGGACAGGTCCCTTGTTCAAAGGTATGACACAAGGTAACCCG
TAAGCCAAGGCACCCAGACCAGTTTCCATACATAGAACCTGCCCCG

Sequence 522

CGACTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTT
TTTTAAGTAAAGAAGGTTTTATAATATAGTGAAAACAATACGGAGATGAAAACAGGAGA
CCTGGGTCCCGCCTTTGTTACAAATGCCTTTCCTAAAAGCTCCAGAATGGTGCGAGGTCA
AAACAGATGGGCAGAAAGGAAGTGGTCATCAGAGCAAGAGAAAGAGCAGGTGCCAGGCAC
TCACGTGTGCGGTCAATCAGGTAGAGATGATGAGTAGAGATCTGCCCTAGAAGACACTG
AATTCTGAGATTCAAAGGGGAAAAGTTGATTTTATAGCCAGTGATTTTATAGCCCACTTT
CCTGCCCCACCCCTACTNTAAGAATTGCGGACGCGTGGGTGCAAGCTTGACCTGCCCCG

Sequence 523

CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTCCCAGAATA
ACTAAATAAATAAAAGGCTAAAGAAAACTGGAACAGTACTGCGTCTCCATCTGAGACGCA
NTCTTCTACTTCCAGCATCGNAGAGAAGGGCTAGGGACAATTTTTTTTCAAAGATTTAT
ATACAGGCTTGAATCCAGAAATTAAGGNTAAAAGCATAAATATTGATAATTTCAACTAAA
TTCAGAAATGGNTTCAGAAAGATATGATACAACAATTTAGAATAAAACAAAGCAGAAGAGC
ATNATATTTTGGCGACGCGTGGGTGCAAGACCT

Sequence 524

CCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACGCGTCCGCTTAAAAGATTTTTTT
TTTATGTAAACTGTTGAATATTTGAAATAGTCCACTTCACCTTAATGGGTCTTGTCTATC
TTCATTAGTCTTCAAAGAAAAACATTTGCTACCAAAGTAAATCAGTATTTTGAATGTGC
TTCTCTTGTTTTTTGTATTAGCTAGTTCCTGTAAGCATTTCCACCAGAACTTGAGGCA
AATCGTAAGGAAGCTGTTTCTTTTAAAACACAAACCACCACCAAAATTTAAATGTACCT
GCCCCG

Sequence 525

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTTCAAGACCCGCCTGGC

TABLE 1
87/467

CAACATGGTGAAACCCCATCTCTACTAAAAATATAAAAATCAGCCGGGCATGGTGGCATG
TGCCTGTAATCCCAGCTACTCAGGAGTCTGAGGGAGGAGAATCACTTGAACCTGGAGGCA
GAGGTTGCAGTGAGTCGAGGTTGCGCTACTGCACTCCAGCCTGGACAACAGAGGGAGACT
CTGTCTCAAAAAAAAAAACCTACAGCTGTTCAAGGACCAGCTGACAGGTCAAGTGTGGCC
TTTTCTGGTCTTTGAACACATCATAGAAAGTGACAAATGCTGCAAAGCCATGAAGAACAT
GAACTATAACGGGTAGACTAACTGCCAGCTTAGACACTTATCTATGCCACAAAACAGC
TGAATT

Sequence 526

CCGCGGTGGCGGCCGAGGTACCAAAACCCGGCTTTTTTCGAAATACCTGCAAAAAAAGT
GGATGATTCCAAATCCAACCTGAAGTGTCTGCTCTCTCCAATTCAGAACAACCAGAAGG
GCCTGTCTTGAATTAGGTAATGCATTAAAGAAAAGTAGGATTATTATTTCCAATTTCTT
CCATCAGATGTAAACATTATTGGTAGATCACATCTGTTTAATAAATCTGTAAGAAAGA
CGTGTAAATTATAATTATGTTACCATTGTATGTAATGGCATTTTAACAAGACATATTAAT
ACATTTTTATAGAGTACCTGCCCG

Sequence 527

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGT
CCGGTTAATTTGGGAGAAGGAAGAGAGAGTGACATATTTGGCTACCTTCAGGGAACAAAA
TCTAACAGCACAGATGGTAGTAGAGGAGATACCAATTTACATATTAAGGAGCTAGAGTTG
ATGATGGTATGACTCAGCCCTCTGAGATTAAATTCTACTTACTAGGGCTATGAATGGAGA
TAAGTAGGTATCCCACCTTTTATTAGAAGGTTCCCTTAAATAAATATGGGACTCTGGTCA
GAGAGTAGGGCCATTAATTTGCTCCTGGTTTTTACCTGGCATCCACCCACCAGTACCTGC
CCGGGGGGCGGNCGGCCCGCCCCGGGCAGGTCCCGCACTTTTTTTTTTTTTTTTCTTT

Sequence 528

CCGCGGTGGCGGCCGCCCCGGGCAGGTATTGCCCTTTGATGTCCCATGAGGGCCAGGCCC
AGGCAGAACCCATCCCATTTTATCCTTAAACTCAGAAGGAAATTTGTCTAAATATTAAAG
GATTAATATGGGGAATAAAAAATGAACCTTAAACCTGCCACTGATACACAAGCTGTCTC
TCTTAGAGTTCAATGAACACTTCAGGAGAGTATTTCCAACAATATTTAGATATTGAATA
TCTAAATATTGTTGATTAGATAACCAACCCTAGATTTCTCACCACCCTAGAACATTTAGT
GGGGAGACATTTCTTTCTCCTTTTCTGATAACTTGGTCAGAAGTGATTGACTGTGCAA
TGGTATTTCTCAGCTAAAATCTCCCTTATGAACCTTCTCGAAATCC

Sequence 529

ACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCCATTTCCCTGAAACA
AGCAGCCAGCAACTATCTCAGAAATGTGTCAATTTTACTGGTTATAATTCTTAAAAAGCT
TGTTTTCTTAAGATATGAAATGCCTGCCAGTATACAACTGTTGTAACCTACTCCCTTTT
TGCTTTTAGCGGGGAAAAAATAGCTTAATGACAGCATAGAATCATGTAGTAAATATAATT
CATTTTTTGAAAGGTTGAGCTATATCCTCTTCCATTTGTTATTTTAAATGATCTAATTG
CAAACATGTCATCACTCCCTTGATGTTTACCTCCTTGTTATGCATTTTAGCAGGCTTTA
TTGTCACCTGAGATTTTTTTTTCTTTGACAGGCCGGAGTCTAGATGAAGGAAAATGTGT
TAGAAGCACCTTATCCACAGATGGGG

Sequence 530

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGTAGCAGAGCAGCTCCCTC
GCTGCGATCTATTGAAAAGCTTGAGTCGACCCACGCGTCCGCTGCATAAAAGTTATGCAA
AAAGCATTTTATGATATACCAGCAAAAAACATGGAAAATGAAATTTTAAAAGCAATGCC
ACTTCAAAGATCCCTCAAGTGCCTAGAGGGAGAAAAATGAGTTAATATGCTTTGAAGAACT
GTATCCAGAAAATAAAATTACAAAGGAGGAGAGGGATAGGATTCCAGGACAATCTCAAAA
CTATTGCTTTTTCTTAAATTCATTGCAACCTTAAATCCTAGCAAGTTCTTTAATGTA
TTAACAAGCTAATTCTAGAATTCATATGCATATTCAAAAGTCGAATAATTGTCAAGGCTA
TCCTGTAGAATGGGACAGAGAGGATTGAAATTT

Sequence 531

CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATCCCGTCTTAC

TABLE 1
88/467

AGAAGAGAAAAGTGAATTTAGCAACATAAAAGTATTTCCCGTAAGTAAACAGTAGAGCC
AAGATCTTGACCTACGCCATCTGATACCGTGAGCCCATGCTATAAAAGAGGAGCATTAGA
AATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTATTTTGCTTAGCACTGTATTCA
GTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTTCATCAAAAAGTTTAAATCTA
ATCAGAGAAT

Sequence 532

CGCTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAATAAGCCCACCC
CACTAGGAACTATGTTAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTAC
TGTGACACCAGGAAAAGCTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGG
TTGGCCATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAAC
CCGTAAGCCAAGGCACCCAGACCAGTTTCCATACATAGAAAGTTACAGCTGCTTTTATAC
CCCCTTGCCCCGCCAACGTAGT

Sequence 533

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTGCGACTTTTT
TTTTTTTTGTAGAGACAGGATCTCCTTATGTTGCCAGGCTAGACTTGAACCTCTGGGC
TCAAGGGATCCTCCTGCCTTGGCCTCCAAAAGTGCTGGGATTATAGGTGTAAACCAGTGT
GCCTAGCCTACAGTTTTTTAATTTTATAAAATGTTATTTCTAATTTTTCTCCAAAAGTAA
AAGTGGCATTCCAATGGCAATATTAATTCAGGTATCCAGAACTCTAACCTAAATTTGGG
TGAGATGAGGAAAAGTGATTGTTAATTTTATGTGTCAACTT

Sequence 534

CTACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCAGGTCTTCGACCC
ACGCGTCCGTAGTAATAGGAATTAAGTACCCCTTTTGGATGGGGGAGAGCATCAGGCTG
GGGTCAAGTAAGTGTAATGGCCTTCTGAGCATGCTCTTCTAGGCTGACTCCCAGCCCTG
ACTTGAAACCATTAGCGCTAACTTGCTCTGTTTTGAGAAAACTTTCCAAACTTTTGCAT
GAGAACTAGAAAAAGGAATGTATGCCACGTAAGTGGATTACAGAAATGAGTTAATTGTC
TCTGTGATAAAAAAAAAAATGAAATATTTTCTTATTGAATTAATTTTTGTCTTGAA
GCATTTTCTAGTGATAGAATGATTTGTCTTTTTTCTGGTGGTACCT

Sequence 535

CCGCGGTGGCGGCCGCCGGGCAGGTGTCCCATGAGGGCCACGGCCCAGGCAGAACCCA
TCCCATTTTATCCTTAAACTCAGAAGGAAATTTGTCTAAATATTAAGGATTAATATGGG
AATAAAAAATGAACCTTAA

Sequence 536

GAANTGGAGCTCCCCGCGGTGGCGGCCGAGGTCCAGTAGATTTGGAGAGTAATACAAATC
CTTTCTTTCTGGTTAGAACACACTGCCAAAAGCCACCTCTTTCATCTAAGGAAAAGATTA
AAAATGCATGTTGATATCTCCTAACTATCACACAACCTCCACTATTACAATGAAAAATCT
GGTCCCCTTTTATTGCCTTTGAAAACCNTTTTGCCGAGGTGGNTTCAAACAAAACNCGNG
ANTTTTNAAAAANTTGGNTTTGGTTTTACCNGGGGAAAGGGGACNTTNNCNNTTTTTTT
TTTTTTTTTTTTTTTTNAAANGNGATTNNGTTNNGTTNTNCCTGGGGCCAAATNCC
NTTTTGNNGAACCTTTTTTGGGGTCCNAAAANNACAAAAANAAAGGNTTGGGACNATNT
TTTTGNATNCNCNCAAAAAATTTTTTTTTT

Sequence 537

ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTTCGACCCACGCGTCCGCTA
GGAAGTATGTTAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTGAC
ACCAGGAAAAGCTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTTGGCC
ATCAGAAGGAAGCCTGGACAGGTCCCTTGTTTCAAAGGTATGACACAAGGTAACCCGTAA
GCCAAGGCACCCAGACCAGTTTCCATACATAGAACCTGCCCG

Sequence 538

CACTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTCAAGCTTCG
ACCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATTGTATTACATGCTGGGAGCA
CAAAGATGAATAATAACAATAGGTTTACAGAAAAGATGAATTGATTGAGAGAAAAAGAAC
CCTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTGGAGNGGTGGGAGGGAATGGAAA

TABLE 1
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AGGCCCTGA

Sequence 539

AATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGACAAGCTTCGACCCACGCGTCCGCAAGT
TTTCAAAATGTAAATACTTCCTCTGTTTAAACAGTCCTTGGACCATTCTGATCCAGTTCAC
CAGTAGGTTGGACAGCATATAATTTGCATCATTTTGTCCCTTGTAATCAAGATGTTCTG
CAGATTATTCCTTTAA

Sequence 540

TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAATCCCATTTCCCTGAAAC
AAGCAGCCAGCAACTATCTCAGAAATGTGTCATTTTTACTGGTTATAATTCTTAAAAAGC
TTGTTTTCTAAGATATGAAATGCCTGCCAGTATACAACTGTTGTAATACTTCCCTTT
TTGCTTTTAGCGGGGAAAAAATAGCTTAATGACAGCATAGAATCATGTAGTAAATATAAT
TCATTTTTTGAAGGTTTCAGCTATATCCTCTTCCATTTGTTTATTTTAAATGATCTAATT
GCAAACATGTCATCACTCCCTT

Sequence 541

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACATTGGA
TTGTTAAAAGAGGAGTCTAGAAAAATTAATCCTGAACCCTAAAGAATAAATCTTAAGTGG
TGGATACATGGGTTGAATAGTGTGCTCCAAAATTCACATCCACTTGAAACTTCAGAGAGT
GGCCATATTTGTAAATAAGGTATTTGCGGGTGTAAATCAGTTAAGGATCTCAAGATAAATT
CATCCTGAATTATAAGTTGTCCTTAAATCCAATTACTGGTATCCTTACAAGAAGGTGAGA
GGAGACAGAATAGAGCCATCTGAAAAGGGTCAGAAA

Sequence 542

CTAACACTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGAC
CCACGCGTCCGCAAAAATCAATCAAGGGTTCCTACTCAAGTAAAAAGCAACTTGTAGGAA
AATAATAGGGGATATATTTTGCTCATTAAAGGATCTTTTATAGTGGCTCTTGGTGCACTG
CCTGTGAGTTAGCCCTTATCCTCAAGGAGCAGCTTAAAAAAAAAAAAAAAAAANGT

Sequence 543

CTACTATAGGGCGATTGGANCTCCCCGCGGTGGCGGCCGAGGTAATCCTTGAAATCAA
TTAACTGAGTCTTTTGAACCCCTAGAGAAGATAGGAGAAAATTGGTTCAGANCGAGCAT
TTAAATTAAGTCAGCAAAGTCAGAAATTTAAATTGGGCAATTCTTGTCTACATTTTCTT
TAACTCAA

Sequence 544

CTNACTATAGGGCGANTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTGCCAAAGCC
TTAACTTAGATCGTTACTNATGTTTCTAAATCANGTGGAAGCACATTTCTTTTCTTCTT
CTTTTCTTTTACTGNNAATATCCTNATTCTNTATTTTACCAGTGGNGAATGTTTAGAATT
AATTTCCATTTAGCTCAAGATTCAAGAAATGCAAAGTGCTATTTTATCAAATTTCTGAA
AGCCTACTGTCTTCTGCTTTGGAAGTCCACAACAGCTCTTTAATTTCTTAAGCC

Sequence 545

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATCACACAGAAGGAGG
AGGGAGCTAATCCAGTAACAAACATTCAAAGATTAAATTGTAGATATGCACCTCTGTATT
TGGCACTGTTGATTAATATTATAACACCTTCCTCTCAAAGACAGGCATTCTTAAGCGTTA
GTCACAATATACCAGAATTTGCTATTCATATTTAAACCACCTTTTAACTTTATAACAGT
AACCAATTATTATAGTTTAAAGAAACAAAACGCAATGAGAACTGGGAATGGAATCAAAT
CCTCCAAATTTCTGCTATGCTCCAAGCTGCCATCCATAAAACAGGTTTAATTTGGGTAAT
TTTTCCATTGTGGGGAAGGGTCAACAAGAAACAATTTAAAGACAATATTTTCCAATACAA
ATAAAGACATACACTTTTTGTT

Sequence 546

TACTTAGGGCGATTGGNANNTCNCCGCGGNGCGGCCGCCGGGCAGGTACAAGCTTCGA
CCCACGCGTCCGAAATAATAAGCTAGAAGTAATATTTTCTTTTGTCTATTTTCCAAA
TTGACTCGATATTGATGGCTACTTTTGTAAGTTTTATTTAAGNTTAAAGGGAATATTTA
TTGATCACCTCTATGTGCTCANTACCT

Sequence 547

TABLE 1
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TACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT
TTCCAGTGCTAAAACATCAGATAAGAGCCTACCTGACATTTTGGAGAATTTGCTGNGCTG
GGATTGATATTCCGCATTGCCTAAGAGTAAAAATAAGACGGACGCGTGGGTGGAAGCTT
GACCTGCCCCGGCGGCCGCCGCCGCCGGCAGGTACCACAGGAGGCAGAAGGAAATCCTCA
ACCTTCCGAAGAAGGCGTAAGCCAGGAAGCAGAAGGAAACCCAGAGGAGGGCCGAATCA
GCCTGGCCAGGGATTTAAAGAGGACACACCCGTTAGGCATTTGGACCCTGAAGAAATGAT
AAGAGGAGTAGATGAGCTTGA

Sequence 548

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGCGNAGGGTCGCGGTGGGTGGA
CTNANGCTAGAGAATTGTAATACGACTACTATAGGGATCTAGATCACGAGC

Sequence 549

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTTTTTTTTTTTTTTTT
TACCAGAACATCACATAAGTTTATTTAGATGTAACAGCAATGTTAAATGACAAGTTT
AATTCTTAAGTGCACCAAGTAACTTAGCCATTTAAGTATTTTTTAAGTTATTCCTCC
AAAAAACTGAGGGAGCTTTTCTTTCCACCACCACACCATGGTTTCCAATAGTTCTCTT
TTTGGAGGACTTTTCAATTGATGAGTAACTGCTTTAGATATTTAGAACTTCATTCCCC
AAATGAAAGCTAATCTGGACAACTATATATTGCATAGATTTCTCTACAGATTCTTTGCT
TAAAAA

Sequence 550

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGGATGAGGCGGGGA
GGTGGGACCCCCAAACATATATCAGCCCAACAGCCCTAAGTCTCCTTCTTTATTATTAGG
AAAACAACAACAACAACAACAAAAAATGGCGTCATGAATATGAACAGCATTGTCAGAT
GAATTAGTTGAAGTGGNTTTTTTTTGTTTTTTTTTTTTTTTGAACCTGCCCG

Sequence 551

CTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCANGTGCTTCGCCCCAC
GCGTCCGNAATAATTGGAAANGGCCTATAGATTAAAAAGCTGAGAAAGTATATGGTAGGG
AGCACACTCCCACAAGTATGAACTCTGNGATTACGACATCTCATAAATNCATGAGCACT
CATGTTGGCTTGCTTTGTAGCTATGAACTTACCCTGTATTATTGAAACGTCAGCATAATG
ACTGGAAGGAGAAATTGGTCCATTTTAGAGCATTACTATTATGCTATCTGTCCATTTAA
TTAATAATTGCATTAAATTCATTTAGAAGNGCTATTACATTNGTAGTAAGAAAGTAAA
TTCATATATAAATATTGATTATCAGATGGTTTACTTACAGATACTTATTTTCTGTAAA
ATAGGAGAGTTTACCTGAAGAAAAATAAACTTTTNACTTTTCTGGGAAAAAA

Sequence 552

CTACTTAGGGCGAATTGGAGCTCCCCGCGNGGCGGCCGCCCGGGCAGGTACCAAGTGAA
TTTAAATAATTGGTGTGGATTGGCCAGTAGCTAAGAAGTGGGCTTTTAAAGAGTNTTGAA
NATNGAANGGGTTTTNTTTCTTTTTTAAAAAAGAAAAACAACTATTGATTGTCTATAA
TGAAAAGCTAGGNNTTGCCTNTTTCATGTNTACTCTCCTTCCAAATAGTTATATCCAAAA
CTGTTTTTCCCTCTCCCTACCTTGTCCCCCTATTAAATANAAACNGGGATTGATTAA
TGTCCCGCTCCTGAATACATGTAAAATTTGTACCTCGGCCGNTCTAAACTAG

Sequence 553

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTC
CGCTTGCTCAATAAAAAACAAACAATTGCTAAATAAAACAACCTGAGAAAATCTCCAGAGA
ACTATACTGAGTGAAGGAAGAAAAATCCCCAAGATTACACACTGTATGTCATTTATATA
ACATTCTTGAAATGACACAATCACAGAAATAGAGAATACTGGTCACTANTGCATTAAGGA
AGGTGTGGAAGGATGTAGTGATGGGAGGAAATGTGTATGGCTGTAACAGGGCAACAGAGG
CNTCATTGTGATGATGGAAGTGTCTGTNTCTTGGGTTTTTTGAATGTCA

Sequence 554

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAG
AACATCTTGATTTACAAGGGACAAAATGATGCAATTATATGCTGNCCAACCTACTGGTG
AACTGGATCAGAATGGTCCAAGGACTGTAAACAGAGGAAGTNTTTACATTTTGAAAC

Sequence 555

TABLE 1

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CTACTTAGGGCGAATTGNANCTCCCCGCGGGGGCGGCCGCTAAAGGAATAATCTGCAGAA
CATCTTGATTTACAAGGGACAAAATGATGCAAATTATATGCTGTCCAACCTACTGGTGAA
CTGGATCAGAATGGTCCAAGGACTGTAAACAGAGGAAGTNTTTACATTTTGAAAACCTG
CGGACGCGTGGGTCGAAGCTTGACACCTT

Sequence 556

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTGG
TTTTGGTTTGTTTTTTGGGCTCTCAGGTTTACCACTCTCTCCCCATCTTCCAGGTTTAG
GAGGCAGGCCTCTNCCTTTCTACCCTCCCACCCGAAGGTGAGTCACTAGAGTGTTACAA
GCTTACTGGCAGGGAACACTACAAATTAACAAACAGTAAGTTACCAAAGGGGATACACC
CTTATAAAAGGGTACCTN

Sequence 557

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCACGCGT
CCGCTTTCAATAGATCGCAGCGAGGGAGCTGCTCTGCTACGTCACAATCTTTCAAAAAA
TGAACATGTAAGAAAAAGCAGTTTTTCATTGTGCTAATTATTGCAGGCCTTCATGCACGTA
AACCTCAACAAAATGTGTGCCAACAATATACAAATTTCCATATAAACAAGTCATTGATC
ACTAACAAAATATAACATGGNTTCTTTTATATTAGATTTTTTTTAAAAAAAAGCTATTT
ACCAGCAAGAAAAACAAGTACCTGCCCG

Sequence 558

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCCG
ATTTATTAAGGCTTGTATATGTTCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATT
GATCTTAACCACAAGGCTGAGAAGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTAT
TAAATCCTCCAGAGAAGCCTGTAGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGG
TGTTTTTTGTGGACCATTTTAAANCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGT
TAGG

Sequence 559

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGGCTTCGACCCACGCGT
CCGCTCCAGGAGACTTCTGCTTACCTCTCAGTGATCAAAAACCGTTTCACCACAGTTACT
TACCACGTCTACCGATCCGCATTCTCGCAAGTGTCTTCACTCCATTTACTCTACTGCA
TTTTTCACTGTATTTCTCATGCCAAAACCTGGGCTTCTCCACCAGTCTGCACACGTTTCT
GCTCTCAATTCTCACAGCCATCTATTTTCACTTCTCACTAACTGTTAGAGGGATTTCTGN
AGAAATTAAGAAATTCCTATCACTCCTAAAAAAGTGCGGCCGCTCTAG
AACTAG

Sequence 560

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACG
CGTCCGCAAGTTTTCAAAATGTAAATACTTCTCTGTTTAACAGTCCTTGGACCATTTCTG
ATCCAGTTCACCAGTAGGTTGGACAGCATATAATTTGCATCATTTTGCCCTTGTAATC
AAGATGTTCTGCAGATTATTCCTTTAA

Sequence 561

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGCTTTATTTATTTCTT
TTAGGAATTGCAGGTTCTAACAAAGTAGGGGTGAGGGGGGTGTTACAAACCAGTCACTA
GGCAGGAACATTAGACTCCAAAAGCAGAGAAATGCTTAATTTTTCTTCTACCTGTTTCAC
CACATTCATGTANAAGTGTAGTAAAAAGATGGNGAATCAGGCTGAATCAATCTAAATAA
CAACTTAAGGCTCCCAAATCACATGAACCTAGGACCACTAAATCCAATGTCAGACGTGTT
TAAATGGNGCACTGCTCTACATTTTTCTATTATGCAAAGAGCTAGAAAATAATGGTAGTG
TCATTATGACATTCCATGAAAATGAAGAAAATCTTTCANGAAAAATTTAGAAAATAAAAA
TGTTTACT

Sequence 562

TTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTGCCAAAGCCTTAAC
TAGATTGTTACTTATGTTTCTAAATCTGNNGAAGCACATTTCTTTTCTTCTTTTCT
TTTACTGNTAATATCCTTATTCTCTATTTTACCAGTGGAGAATGTTTAGTATTAATTTCC
ATTTAGCTCAAGATTCAAGAAATGCAAAGTGCTATTTTTATCAAATTTCTGAAAGCCTAC

TABLE 1
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TGCTTCTGCTTTGGAAGTCCCACAACAGCTCTTTAATTTCTTAAGCCCCACTTTCCTC
ATCAGCAAGTTGGTGTGGCAATGGATCATAATAGGTTGCTGGGAGGATGAAGTGAGCGGA
CGCGTGGGTGGAAGCTTGACCT

Sequence 563

CTACTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCAGTAATCACATA
AATTCTGCAATCATCTGTTTATTTAGCTTAAGTGTGTTTTTTTTTTATTTGTTGAAGTTGT
TGTTGTTATTNCAGTCTTTTTCTATTGGGTTGACCAGACTTGGTAAAATCTGTAAGAAA
GTTCCATAAT

Sequence 564

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTTCTTCAGATTCAAAT
GCCAACACTAATTTGAAGTCTTTGGGTCTATGACAGTTTGCAAGCCATACAAACCCAAA
GAGCTAATCTGTGATTTCTTAAGTGGAGAAAATAATAATNATAACCACCACTGGAACCTA
CATAGGTTTGTNGNTTATTTAAGTACTTAACCTTTTGTGTTGATTTTTTGAAGAAAAA
AAAAAGAGTACCTGCCCGGGGCGGCCGACGGCCGGGCAGGTGCGNCTCAAATTNT
TNAATTTNTTTGGAAGACANGNATTTTTATTTTTGCCAANGCTAAAGTTNACNCTG
GGCCTTTAAAGGGGATTCNTNCTGGCCTTTGGGCCNCCAAAAAGTGCTTGGGATTNTN
GGGTNNAACCCCGGNGGGGCCCTAGCCTACCAGTTTTTTTAA

Sequence 565

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCC
GTGCAAATTTGACTTTGTAAATGGCCCTTGGGCTCTGGGAGGAAAGCAACTGTTGGGCCA
TGTGGTTGTATCTTTAGTTTTGTAAAGAAATGCCAACTGTTTTATAATGTGGGTATATC
TTCCACACTTCCAGCACAAATGTATGAGTGATCCAGTTTCTTAGCACCATAGTCAGAATT
TACTGTTGCTACTATTTTTAGCTATCCTGATAGATGTGTAGTGATTTTTATTCTGGTT
TTGAAGCAGTGTCAATTGTCTGGGGTAAATCCTTGAGGTTTGTGTCTCAGTCAAGGGGAA
TCAAGGGACATGGACACACAAGTAGTGAATTTAAGAGTGGAAGTTTAATAGGTGA

Sequence 566

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTCAAGCTTCGAC
CCACGCGTCCGTCTTATTTTTACTCTTAGGCAATGCGGAATATCAATCCCAGCACAGCA
AATTCTCCAAATGTCAGGTAGGCTCTTATCTGATGTTTTAGCACTGGAAAAAAAAAAAA
AAAAAAGT

Sequence 567

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTCAAGCTTCGAC
CCACGCGTCCGCATTTTTCTTACTTGACAAATGTGGGATGGGTGCAATTTATTCATCT
TCACTAAATAGAAGCAATTCATAGGTACCATAAACCTATTTTAGGTACCACAAGGTGT
CTTTTACACAGCTCATTTGAATACAGGTGTTCTGAGAAGGGGTTTCTATTTTAAATTA
CCATATCAAAATAAATGTGCCTTATTTTTTATAAGNCTTGTTAAATCAGTGTCATATT
ACTGTTTGGGGAAGG

Sequence 568

CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAATAAGCCCACCCCACT
AGGAACTATGTTAAAAAAATTAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACCTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTTGG
CCATCAGAAGGAAGCCTGGACAGGTCCCTGTTTCAAAGGTATGACACAAGGTAACCCGT
AAGCCAAGGCACCCAGACAGTTTCCATACATAGAAAGTTACAGCTGCTTTTATACCCCT
TTGCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAGGAAAG
ACCAGTNNAGAGAAAAAAAGGCCATCTATACCAATTCTAAG

Sequence 569

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTACGAGCGGCCGNC
CGGGCAGGTACACAAACCAGATGTATGCANTGATGCCAAAAGTCATCTNAAAATTCCAAG
CTGACCTAGTGCAACACATTTACACTTGGATAAACTATCACCTTGAAGATTTACTTTGTA
TACTTCAAAGATCTGGTCATGAAATTTTTAGCTAATACATAAAGNGCCGAATTGAAATC
CAGAATACAATAGCTNTGAAGGGCCGCTAGAGTGACAGATAACCAACCCATTCTACCTAAC

TABLE 1

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TCAGGTTGAGATTGCTTTAGAACCTATCATTGGGCTTTAAATGGTCCACAAAAAACAC
CTCATGGGCACACTTAAATAGTTTGCATCCACACTACAGGCTTCTCTGGAGGGATTTA
ATACTTTGGG

Sequence 570

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTTATTTCCCTCAGTAAC
ATGTAATTGCTACATTTTTATAAGAAGGTATGGTTAGAAAAAATGTGAAAGATCACTT
AAACCAAAGCCAGTTACAAGGAGTAATCTCTCCTGTTGGTTTACCTTACCTCANAATA
CAAGAATATTACAATACATAGTGAATAGTTGTCTGTAAACATTTCTACCAGTTGTTTCANT
AGCATATTGGTCTTGGCATTCTTGGCACTGTGGTTCTGCTGTATTATTTGTGATGTCTT
ATTGTTTGTGAGCTTTTGTTTTTTTTAAAGAAAAACAAAACTAAGTG

Sequence 571

TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGAGGTACCCAGTAATCACATA
AATTCTGCAATCATCTGTTTATTTAGCTTAAGTNTTTTTTTATTTGNTGAAGTTGTTG
TGTGTTATTTCAAGCTTTTTCTTATTGGGTTGACCAGACTTGGTAAAATCTGTAAGAAAG
NTCCATAATTATGGGGAAGATTCCTCTGAATTGGCTAAATTCCTGTAGCTGAAAAAAA
AAAAAAAAAAAAAGT

Sequence 572

TTAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTGTACAAGCTTCGACCCACGCGT
CCGCAAGTTTTCAAATGTAAATACTTCCTCTGTTTAAACAGTCCTTGGACCATTCTGATC
CAGTTCACCAAGTAGGTTGGACAGCATATAATTTGCATCATTTTGTCCCTTGTAATCAAG
ATGTTCTGCAGATTATTCCTTAA

Sequence 573

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGAGGTACTTTTACGGC
TTCTGACAGGCCCTCAGAAGAACATTCCCTACCCCAAATTATAAAAAATAATCTTGATAT
ATTCTTCTCAAACCTTTATACTTTTTTAAGGCTTGGATTTTTAATCTATCTGGAATGTA
TTTTTAAATACTGAGTGAGTCACTTTTCTCCCGACGCGTGGGTCTGAAGACCT

Sequence 574

GAATTGGAGCTCCCCGNGGTGGGGCCGCTCGAGGCCGCTCTGACCTCTTTAAGGNANACT
TATTATGCTAATAGTTGATGCGCCCTTTTGTGNANCAGTTACCATAGGTTACATGATAA
NTATATATTGTTGNATGATCTGATTNCCTGNNTNCCCCACCCNTGCAAAACAACAACAA
AAACCTTTACCAGGCTNTATAACANGGGGACCAAACCTTGNTTTTGCTCATCATTGCCGGA
CG

Sequence 575

AGGTACTTACCCAGACAACGACGCCGCTTCACCATGATGATGGACAACAGGCAACTTTT
TTTTTGGAGTTTCAGCTTGCTTCCAACAGGGACGGTGAGTGTGAGGTTTATTCCCATTTT
TAAGACGATAGAAGTTTTAGCCTAAGCCGATTCTAGGTAAGCAGCTGGATTGCAAGT
TTTGTCTTGGAATTCTCCTTAATGACTAAAAGTTAAAGAATTAAACAACCTAGCTGGGC
TTAAATTTCTTNCTTACCCATTAGAAGTACCCTTGCCC

Sequence 576

TAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGNGGTCTAAGAGACAGGGTCTCACTACA
TTGCCTAGATTGGNCTCACACTCCTGGGCTCAAGCAATCTTCCTCTCTTGGCCTCCCAA
GTGTTGGGATTGCAGGTGTGCGCCACTAGGCCAGCTTGAAAAATTTTAAATGCATGTGG
TAATCCACAGGAGATCACATTTAGTATATGACCAAGTTAATTAAGAAGNCAAAAAACACG
TTAAATTTAAGCAGAATAAGGCTGGGTTCCGTGGCTCATGTTAGTTTTTATCCTTAAAT
TGTCTGAGTTCTTAGAACACAGAAAAACAAATTTGAATGCATTTCTAACAGCTTAATAA
TTTATATGTCCATTATG

Sequence 577

GGGGNGGCGGCCGCGCCGAGGTCAATGCTTCGACCCACGCGTCCGATTTAGGTTGAC
TTTTCTACCTTTAACCTCTTTATATAGCACAGTGCAATCTGGCCCTACTGCCACTTCAT
CTGGGTTATCTGTAGCTTGAGTTGTAATAAAAAAAAAAAAAAAAAAAGTGCGGCCGACCT

Sequence 578

TABLE 1
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AGGTGTCGACTCAAGCTTTCAGATATAGGCATTCCAGAATCTTCTCTTTACGAGTTCACC
TGCTAGTATAATCTCCACAACCTGAATGGCATTGGTTGTTCTGTAATTCCTGCCAAAAGC
ATCACAAGTTGTACCTGCCCG

Sequence 579

CCGGGCAGGTTACAAGTCGACCCACGCGTCCGCTTCAGAATATCCAATTCATGTGAACCTA
CAGGAAATTATAGTTTAGATATTTTTAAATGATTGCCTGTCACCGTATAACACAAGGGT
GTCATGACCAAGCTAGATCTCTTTACCATATCATTAAATAAAAGTCAAATTTTAAATTTGT
GCCCAATTTGGCTGGGTGTGGTGGCTCATTCTGTGATTCCAGCACTTTGGGAGACCT

Sequence 580

GTGAACCTGCCCGGGCGGCCGCGCACTTTTTTTTTTTTTTTTTTCTTTTGAGACA
CAGTCTCACTCTTGCCCAAGTTGGTCTAAACTCCTGGGCTCAAGCAATCCTCCCGCTT
CAGCCTCCCAAAGTGCTGGGGTTACAGCCGTGTGCCACTGTGTCTGGCCCTTTCTTTTT
CATAGGAGAAGGGTTGTTGACTCCCAGGAAACGTCACCTGGAACCAAGAATGTGAACCTCA
AGGACCCCCGCTGTTGGCAGCTGCATTTACTTGACTCCTGTTCACTGTTTCTTAGCCTT
GTCCTTCTCTCCTGCCAGTTCTAGGGGACACTGCTTCTCCTGGTTGACCTC

Sequence 581

CCGGGCAGGTACCCTAAACTTAAAGTATAATAAAAAAAGATTATTTCTATACTTCAA
AATCAACAAGATTTGATTGCATTTAAATTTTTCTGTCCATTTGTTCTTCTATGTAATACT
TTAAAAATAATTGGCATAAAAAATTCAATCAATTCATAAAAGTCCAAAGCAAAAAAACAA
ATCTACTGACATCTCTTGAGGAAGAAATGATCAGGATTGACATTAATGAACCTCTCACA
GAGACCACTACACACACACACAAAAAGAAGGATGGGTGAATGGATGCAGAGAGAATTT
AATAAGACTGAAATGATGCCATACATGCTTTTAAAAAATAAAAAAGTATTAATTTTAA

Sequence 582

CCGGGCAGGTACTTATACTAGAAGATGCTCCAAGGTTTCAGAAAGGAATTAATTACTTTC
AATTTGCACAATTTAGAACAATATCTGGCTTTTCCCTAAGCTTAATGATTTTCCATTTT
ACACAATAAAATATAATAGCATTATTTTATAATCAAGTTTAACTGATGGTCTATGATAG
TAGAGCGATTTAGTATTTTGACAAAACTTTATGAGACATGAAGTCATTCAATTTGCCGG
ACGCGTGGGTGCACTCAAGCTAGACCT

Sequence 583

AGGTGCGCCATCACACCCGGCTAATTTTTTTTGTATTTTTAGTAGAGACAGGGTTTCACCA
TGCTAGCCAGGATGGTCTCAATCTCCTGATCTCGTGATCCGCCCACCTCAGCCTTCCAAA
GTGCTGGGATTAAGGCGTGAGCCACCACGCTGGCCAGGAGATTCTTAATTTATTTCTGA
ACTCTATCAGTTTTGTATTAGGACATCTTATTTAATATTATCAAAAGATAGTTCTCTTA
GAGGCATAAATCAGTCAATCAACAAACAATAGGCAATCACGGACGCGTGGGTGGAAGACC
TGCCCG

Sequence 584

AGGTGTACAAGCTTCGACCCACGCGTCCGCACTTTTCTGGTGTTCCCTCTTACGTGCACA
CCCCTTGCTCCCCTTTGGGTTGACTTATAATCTGACTTTTGTGACAGATGTTAGGAGGTG
GAGCAAAGGAATTTAGACCAATCAGTTAAGAGACTGCTGTGGGGTAAGAAAAAAATTA
GCCTCTTAAATTAATCTTATCAAAAGGAAAAAAGTTGGAAGCACATGATAGTATAACCA
GAAACATGACACAGAAGAATTAAGGGAAGAACCTGCCCG

Sequence 585

CCGGGCAGGTGGAAGGTGGGTGGGGAGAGGGAGGCTTATTTGTTGCTGCAGTGTAACCTA
AGTGAAACCTAATTCATATGACTCAAATAAGGTATATTTGGTTAGATCTAGGTGAGTTC
TACTTTAGAGGAAATCCTGGTAACCTGTTGTTTGTGTTGTAAGTTATAGCTGTAATTAATTT
TCCCTGTATTCAAAGCCCCCAAACCTGCATTCAGATACTATGCATTTAGACTTCCTTAG
GCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAAGGAGTATCTACCATCA
TAAAGGTGGTTTAGTCATATAGATAATATCAATCAATAAT

Sequence 586

CCGGGCAGGTCTTCGACCCACGCGTCCGTGATTGCCTATTGTTTGTGATTGACTGATTT
ATGCCTCTAAGAGGAACTATCTTTTGATAATATTAAATAAGATGTCCTAATACAAAAGT

TABLE 1
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ATAGAGTTCAGAAATAATTAAGAATCTCCTGGCCAGGCGTGGTGGCTCACGCCTTTAATC
CCAGCACTTTGGAAGGCTGAGGTGGGCGGATCACGAGATCAGGAGATTGAGACCATCCTG
GCTAGCATGGTGAACCCCTGTCTCTACTAAAAATACAAAAAAATTAGCCGGGTGTGATG
GCGACCT

Sequence 587

AGGTACATTGTTAGACAAGTGTTTATCACTAATCTGGAATACATCATCTTCAATAAGGCT
CTTGTTTTCTCCAAGCTGCACTGCTCACACTGCTCAGTTTTCTGTTAAGCAACCTGCTC
ATTATAGTAGAGCACCAGGTGATCTGTTCTTCTGTTCTTCAGAAGTTCACTATTTCTTG
TTGCAACAGGGCTACATGATTTTAAGATTCTCAAAGTCAATACGAATTAACATTATTTT
CCATTTCCATTCTGTATATCTTCACATTCCATAAATAATACTCATGTATACGTTAAAT
TTCCTTATAAGTTCAACACATTGAAAGCTAAAATAAAGACTTCCTACTAG

Sequence 588

CCGGGCAGGTACACAAACCAGATGTATGCAATGATGCCAAAAGTCATCTCAAATTC
GCTGACCTAGTGCAACACATTTACACTTGATAAACTATCACCTGAAGATTTACTTTGT
ATACTTCAAAGATCTGGTCATGAAATTTTGTAGCTAATACATAAAGTGCCGAATTGAAAT
CCAGAATACAATAGCTATGAAGGGCCGCTAGAGTGCAGATAACCAACCCATTCTACCTAA
CTCAGGTTGAGATTGCTTTAGAACCTATCATTGGCTTTAAATGGTCCACAAAAAACAC
CTCATGGTCACACTTAAATAGTTTGCATCCACACTA

Sequence 589

CCGGGCAGGTGACTTGGCTGTGAAAAGTGCTAAAACAGATAAAAGACTATACTGACAGGC
AAATGGAGCCTGTTATGACACTGACATTGAAGGTGAAAGGAGAATCCAGTTCACATTAGC
CAGGGTCTCAGGGACCAGGTTTTGAGGCAGTATTTCTGCCTCTTGAGGACAGGGCAGAGC
AGGTGGGTAAAAAGCAAAGAGACCAGGGAAGGGGGACTAAAAGTAAGGGAAACAGCATCT
GAGGAAAGGCTCCTCTGACTGGATTTTACAAACATTATTTATTAACCTCACTAAACAAG
GATAATGGGACAAAACAGGGGCAAGCTGGAAAACAGCAGGGGTATTTGGCAG

Sequence 590

CCGGGCAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAA
GGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCC
GTGTTGGTCACTGNCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTGTTGGAGCAA
GTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTG
GTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGC
ACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATATTCCCAGGAC

Sequence 591

CCGGGCAGGTGAAAAGTGCGTGGGGAGAGGGAGGCTTATTTGTTGCTGCAGTGTAAC
AGTGAAACCTAATTCATATGACTCAAACCTAAGGTATATTTGGTTAGATCTAGGTGAGTTC
TACTTTAGAGGAAATCCTGGTAACCTGTTGTTTGTGTAAGTTATAGCTGTAATTAATTT
TCCCTGTATTCAAAGCCCCCAAACCTGCATTAGATACTATGCATTTAGACTTCCTTAG
GCAAAGTCAAGGCAACAAGCTGATGATTCTAAGCTATTATTCAAGGAGTATCTACCATCA
TAAAGGTGGTTTAG

Sequence 592

AGGTCAAGCTTCGACCCACGCGTCCGCAGCCTGGGTGATAGTGAGATCCTGTCTTAAAT
GAAGAAAGAAAGAAAAAAGAATGAGAAGGAAGGATATTAATTGAAGTAAGAGCACATTT
GATTACAAAATAGAAGAGGAGTAAGTGAGAACTAAACGGGGAATACAGATAGCAGAGATT
AAATAGGCTATAAGAAAAAAGGGATGATAATAAGACCATGGTAGTACCTGCCCG

Sequence 593

AGGGCCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGTTTA
CAATATGGTGACAACAGATAACTGTAAAACTTCTTTTCAAATAGAACAGCAGGAGCA
TGCATGGAACACATATACCAACATCTTTCTGATAACATTAAACATTTTAAAGATGTT
AAATGTTCTTTTCATTGNGGTGCTTCAGATTCTGATTCTAGAACTTGTGTGTGTGGAAC
CTGTGTGCTAACTATTCTGTTGGAATTTACCAGCAAAGAATTATCTAAGAATTTTCAAAC
TAAATGATGGGGGAAGGAACATAACATTTTTGCAGNCCCTGGAAATGTAAATGTTGTACC

TABLE 1
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Sequence 594

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAATAAATAGC
ATTCCCACGGTGACCACAAGTCTTGGAATCAGTTCCAGGTGTCGTGCGTGGCCGTTGACAC
CGCTGCCTTCTGACGGTAAATGTATTGTAGAATTCATGTTGTTATCAGGCTTCAGTTTCC
TCATCTCTAAATGAGAGGATTGGATAAGTTAGTAGTTTCTAATTTTTACTTTAATCAG
TGGCATCTCCCATTTATTTTTCATTTGAAATAAACTTTTTGAATTTTATCTTCTACCTAA
ATAACATATTTTGTATTTATGTTTCAAGATGAAGCTCACACTGAGTTGGAAAAAAGGAAAA
AGCAAAGGATCAAAGCTG

Sequence 595

CTATAGGGCCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTGCCAAAGCCTT
AACTTAGATTGTTACTTATGTTTCTAAATCTGTGGAAGCACATTTCTTTTCTTCTTCTT
TTCTTTTACTGTAAATATCCTTATTCTCTATTTTACCAGTGGAGAATGTTTAGTATTAAT
TTCCATTTAGCTCAAGATTCAAGAAATGCANAGTGCTATTTTTATCAAATTTCTGAAAGC
CTACTGTCTTCTGCTTTGGAAGTCCCACAACAGCTCTTTAATTTCTTAAGCCCCACTTT
CCTCATCAGCAAGTTGGTGTGGCANTGGATCATANTAGGTTGCTGGGAGGATGAAGTGA

Sequence 596

ATGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGA
TTATTCTCTCCATTTAGGCTATAAATCTTTCAGTGTAGGGTGTTTCTAATGTCATATTCT
TCCAAAAAAAAAAAAAAAAAAGT

Sequence 597

CCGGGCAGGTCTTCGACCCACGCGTCCGGCTCTCCAGTTTATACATGAAGAACTTTCCG
AAAGTCTTGACAGCTTGTTGGAGAGCAGAGCTGGAGAGCAGGCTAGTCTGATTTTAGAAGGG
AGTTAACCATTACATAACCTGCAGGTGGCTTCTCCCACATCCTGCCGTGGGATAATATGG
CTCACTTTTACTTCATTTACAATATTTAATAAGTGCGATTTTAGACTTGAGAAGAGAAT
ATTTTCTGCTAAAATTATCCCCACTAGAGATAATCACCAGTGAATTAATACTGCAGCA
ACGGAACCATCAGCTTTTTTGGTAATCATTCCCTTCCT

Sequence 598

CCGGGCAGGTCTTCNACCCACGCGTCCGGCTCTCCAGTTTATACATGAAGAACTTTCCG
AAAGTCTTGACAGCTTGTTGGAGAGCAGAGCTGGAGAGCAGGCTAGTCTGATTTTAGAAGGG
AGTTAACCATTACATAACCTGCAGGTGGCTTCTCCCACATCCTGCCGTAGGGATAATATG
GCTCACTTTTACTNCAATTTACAATATTTCAATAAAGTGCGATTTTAGACTTGAGANGAGA
ATATTTTCTNCTNAAATTTATCCCNCTAGAGATAATNNACCAGTGAATTNATACTGC
ACCNACGGAAACCAGTCA

Sequence 599

AGGTGCTTCGACCCACGCGTCCGGTATTTCTCTTAAAGTTAATTTGATAGATATTTATC
TAGATGCTTTCTTTTTTCCCTTGCCATAATAGCTGGCTGTAGAGAGAGTTATGTTTGAA
AAGGCTTGCCTTTTTTCCGTCGCTCTG

Sequence 600

AGGTCAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGTCAAAGCTGAGGAGTTT
TGTGGTGCTTCTCAGGAACCTTCTGTACGGAAACCATTGCACCCAAAATTGCAAGACC
TTTCATAGAGACTTTCCTCAGGCCCTCAAGAGTATTTGAGTATCTGGAGGAGGATGCCCA
GAAGTCCNCACAGGAGGGGGTGCTTGGGACCACACACTGATGCTCTTGNCATTGAGACTC
TGAGAAACATGCCGCGTGATGAANAAACCATCCCAATTANANGAAGCTAGCTGNNTTNCA
TTGNAGCAGCTTTACCCCAATTT

Sequence 601

CCGGGCAGGTCAAGCTTCGACCCACGCGTCCGTGATAACTTCTCCTAAGTGCCAGGCATT
GTATTACATGCTGGGAGCACAAAGATGAATAATAACAATAGGTTACAGAAAAGATGAAT
TGATTGAGAGAAAAAGAACCTCCAGGAGCCCTCAGCGTAGTAGGGGGTTGGTGTGGAG
GGTGGAGGAATGGAAAAGGNCCTGAAATGCANGCAGAGAAATGATGAAACAATTCNNGG
GCTGCGGNGAGGTTANATGAATATCTTTACAGCAGCCTNGAAGACTGATCANGTTACTAT

TABLE 1
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ACCCTCTCTTCTGTCCACGTGCATTTNA

Sequence 602

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCATTTATTAAGGCTTGTATATGT
TCAAGATCCAGTGAAGACTGTCTTGGGCGTGTATAATTGATCTTAACCACAAGGCTGAGA
AGTTATGTGCAGGGCTTATGATGCTACTTCCAAAGTATTAAATCCTCCAGAGAAGCCTGT
AGTGTGGGATGCAAACTATTTTAAGTGTGACCATGAGGTGTTTTTTGTGGACCATTTTA
AAGCCAATGATAGGTTCTAAAGCAATCTCAACCTGAGTTAGGTAGAATGGGTTGGTTATC
TGCACTCTAGCGGCCCTTCATAGCTATTGTATTCTGGATTTCATTCGGCACTTTATGTA
T

Sequence 603

ATTGGAGCCTCCCCGCGGTGGCGGCCGAGGTAGCTTGAGTCGACCCACGCGTCCGTTTCAG
ATCGTTTTAGAAAACGTGAGTCTCTAGCTCAGGAGATTTCCACAACGTCTTAGTAACC
TGATCTTATTCTCATGTTTAACCTTGGCAGTGGGAAGTCTTCTGCTATCCTGCCTAAT
TACTGGAGTTGGCATTAAATGCCATTTCCCTTAAGGCGTGGCTCTTGGACCAGTATCAC
CTGAGAATTTGATAGACATAGACCCAGAGTTACTGAGGGCAGGTGCTCTGTTTTGGGGAC
CAGCAATCGGTGCTTTAGCAAGTNCCTTGGGTGATAGGGGTTNTGGAACTACTGCTCTA
AAGCATNATCTGTTTTTGAC

Sequence 604

GGTACCCAAAAGATATCACTGTGAAGGTTTGGATACACTGACTGAGGAAAAAGAAGGTC
CTGAAAGCGTNTAGACAAAAAAGACTACTTGTAAGTTGCAAGAATCAGAATGGCATTGG
ACTTCTCAGCTTTCTCATTAGAAAGTTTAAGATCTGAAGCAATCTTTAACTCGTGAGGA
AAATTAAGTCTAATAAATANTTTTCTTCTAGCCCAAACAATCAAATGTGAAGCTAGAAT
AAGCATTTTCAGGTAAAAAAGTGC

Sequence 605

CCGGGCAGGTACANNTTGTGATGATTTTGGCAGCAATTACAGAACCAAGGCCATTCA
AGTTGTGGAGATTATACTAGCAGGTGAAGTCTGTAAGAGAAAGATTCTGGAATGCCTATAT
CTGAAATCAGAATCCTAGTAGTTTGTAGTTTGCCTCTTCTAGAAAGTTCAAGAGACTCAA
GTCATAGGCTACAGATGTACCTN

Sequence 606

AGGTCTTCGACCCACGCGTCCGCAACTGTTGATCTAACTTTTCCACTTGAATGTCTAATT
GGCAAATCAAACCTAACATGTTCCAAACGAGTTCTGAAGCACCCCTCTGCCAAATCTAC
GTCTCCACAGCCTTCCCTATTTCTCTACCTGGTACCTGCCCGGGCGGCCGCTCGACCTG
CCCG

Sequence 607

AGGTCTTGAGTCGACCCACGCGTCCGGAGATGTATACGCCACTATAGGAACTATAAGAAA
AAGTCAAATGGAAATCTTATAAATAAAAAACACAGTCACTATAATGAGGAAATACTTTGA
TAAGGTGTCAGTGAACCTAAAAATCAATCAATAGAACTACTCAAATAAACTCAAAGA
GAAAAAAGATGGGAGATAATTATTTTAAAGAAATTGGTCATCAAATGTAGCAACAA
GTTTGCCTTATCCTATATCATTTGAATTTTCAAAAAATAAGCTCATTATACAATCTTTAA
AATATTTTGAATAGAACTGTTTCATGTGTTATTTGT

Sequence 608

AGGTCAAGCTTCGACCCACGCGTCCGGGGAACCTTGTTTCAGGTTCTTTTAGGCAACCC
AAGCCAAGACAACAAAGTAAGATAGAGCCCCAAATGTGGTCGTATAAGGTTTTTCAAAGA
AAGTAACACTTGAGTTAGGTCTTAAAGTTTACCTAAGAACTGCCAGGTGGACAAGAA
GAAAGGGTGTTCAGTAGAAATAATAGCATGGACAAAGGCAATGTAGCAGGAAAAGTCT
TCGTAAATTCAGGGAATTTCAAGTGTTTCACGATGGAAGGAGCAATAGAGTCATTTACTT
GCGGTGGCAGGGGATGTTGGAATGTAAACAAGAGTGAGATAC

Sequence 609

AGGTCAAGCTTCGACCCACGCGTCCGTGATGCTGGCTTCCCGGTCAAAGCTGAGGAGTTT
GTGGTACTTTCTCAGGAACCTTCTGTCACGGAAACCATTCACCCAAAATTGCAAGACCT
TTCATAGAGACTTCTCAGGCCCTCAAGAGTATTGAGTATCTGGAGGAGGATGCCCAGA

TABLE 1
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AGTCCGCACAGGAGGGGGTGCTGGGACCACACACTGATGCTCTGTCATCAGACTCTGAGA
ACATGCCGTGTGATGAAGAACCATCCCAATTAGAGGAGCTAGCTGACTTCATGGAGCAGC
TTACACCAATTGAA

Sequence 610

ACTTTTTTTTTTTTTAGCTTGAGTCGACCCACGCGTCCGGGGATCTAGATCACGAGCG
GCCGGCCGCCCGGGCAGGTACGGAAGCCATGCACTTGCCTCTCCTTCAGAGCTGGGATTT
TTTTTCATTTTGCTGGCTGTGAGCACACACACGCCACAGGTGCCTAAGCCTCTTGATG
TGTGTTTTGAAGTGTGCTCTGAGTTCTGTGTCTGGGTGCATGCTCTCCTCTTAGCGTG
GGTCTCCTTCCCCTGTGTAGCACTTCACAATGTTAGGCATTTGTCTGTGATAGCAGCTGT
TCAGTAATTTCTACTT

Sequence 611

AGGTTTCGACCCACGCGTCCGGAATTTATCTGGCCAGGCATTGGTAGTTTACAGAAGTCT
ACCAGATGATTCTAATGTGTGGTCAAGACTGAGAACTATGTGTTAATTGGGTTCATTTT
AAGAATACTGTAAAAATTTTATCTAAATACTAAATATCCATAAAAGAAACCTCGGTAATC
AGGCCAGTTTTTGTGTTTTCCAGATTAGCCCAACTACAGGGGAAAGAGACTTTTCGCAC
TATATCCCAGAGTCTCTGCTCCTGCTTCCAGCCTCAATGCACTGGGCCTTTCTGCTGCCT
TGGAGCACTTAGAGGGATTACAGGAGGAGTGATCTGTGGAGTT

Sequence 612

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCAGCGCCCGGGCAGGTACATACAGCCTGAAG
TTAACCTTTCTATGTTAAATGAAAAAATTTGTCACTTCATCAGGTCACAGAAACCAAAAA
CTAAACAATGCAAAAAAAAAAATCTAAAAATAAAAGAAATTTATATTTGAAGTTATTC
TGGATATTCGCACCATTTTAGCTTCTGAAAAAATGCAACTATGAAATGAAGACCTCATA
TATTTTCATTTATCAATATAATGTTAAAAGTTTCATTCCACCGGGTGTGGNGGCTCACAC
TTGTAATCCCAGCACTTTGGGAGGCCGAGGCCGGGCGGATCATGAGGTCAGGAGATCGAGA
GTATCCTGGCTAACATGGTGAAACCCCGTCTCTCTAAAAAAATTCNNNAANAANAAAAAA
AAGGAA

Sequence 613

CGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATTGTAGTTTTCTTAGCCATTTTTT
AATAGTCTACACAGTGTTTATGTTTCCTTTTATTTGTGTATAGTGGAGTAGAGGGGAGGT
TTTTTTATTCAAATAGAAGAAGCTAAACTCAAATGCAATGTCAGATCTCANAATAAACT
GACCCAATTTCTGAAACCCAATAAACACATTTTCAATTTGTAATATTCTTTATTATATAGCT
CTATGAAAAGTAATTTGTGACTTTCGATCTTAAAAGAGAGTTTTAAAAATACACAGTAA
TTGAAAGAAAACTACTACATTTAAACAGTATTTTCTGAAACATAGAATGAAATGC
AAGTATTTTGTGCATGGCAGCTGTTTTTAAGGAACCAATGTTATATATGGNGAATTTTGT
GGAAGACTATGTCTCTTAAATATTTCTTATAAAATANCATGGCTTTTTAATAGCTGGGA
ATCTGANGNNGGATTTCCCATGAAGACCTTAAATGGCTNNGCAGGAATTATAAAAAAG

Sequence 614

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGCCTGTAATCCCAGC
TGTTGGGGAAGCTGAGATGGGAGGATTGCTTGAGCCTGGGATACTGATATTGAGGCTGCA
GCGGGCCGAGAATACCACTGCACTCCAGCCTGGATGACAGAGTGAGACACTGGCTCAAAA
AAAAAAGAAAAAGGAAGAAAAAAGTTTAAATCAATGAATGTTCTCATTTCTAATGAAAT
AATGAAACATTATTGGGAGAGTTATAGTCATAATCATCTTACTGCACTATCAATTA AAAA
ATACATCATTTTTTAGAGCACAATATATACCATAAAGAATTATTCAAATAGTCTAAATAT
TACGATCAAATTTTTAATAGACTTTGTTACTTAAACTAAAAGTATTAGTCTGTATTAG
TCAGCTCAAGTTGGGATTCACACCTGTAATCCCAACACCTAGGGGGGC

Sequence 615

CCGCGGTGGCGGCCGAGGTACACTGTGTAAGTGGTCAAAGATAGACATGGTTTTATTAC
AAGGAAATTTGCTGAAGTGTAATTATAACACGAAGAGATGGGAGGGAGGGGTAAACACC
TAAATGTCTAACACAGAGAATGGTTCTCTGTTGATACAAAATTATGATACATCAAAAA
GAACAACAATCAAATCTCTGAGAATCCCATTACAGTTAAAAGGAGCTCCAGCCAGGT
GCGGTGGCTCACGCCTGTAATCACAGCACTTTGGGAGGCCGAGTCGGGTGGATCACGAAG

TABLE 1
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TCAAGAGATTGAGACTACCCTGGCCAACACTGTAAAACCCCGTNTCTACTAAAAATACAAA
AATTAGCTGGGCCGTGG

Sequence 616

TTAGGGCGAATTGGAGCTCACCGCGGTGGCGGCCGAGGTAATAACTGCCAATGCCA
TCTGCCTGTGGCCTTCTCAAGTTTGTCTGCACCTGTGGTTATCCTGACTTCAAACCCGGG
GAGACAGAGGCTAGAAGAGGCAGACAGCTCTTGTTGTTATTCTCCTGTCCAGTGCAAAGAAC
ATCTGGAACCTCTGAGCCCTAACCTTAAATGCAAGACCTNATCTGCAGGTGTTCCCTNATCC
TTTTAGCCCTCAGTGATGTAAGCAACAAACGTCACCCANCTCCTGGGGCACACTTNACT
CCAGATGAGCTTGTCTGGATTTGCAGGGAGCCTGGCTCCC

Sequence 617

TAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCGGGGCAGGTACATCACCTGCTGA
GGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCC
GCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGT
TCTCCTCCAATTTGGACCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATG
CCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTCA
CCATCACCAACCTACCATATTTCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGA
GGAACAAAAGGAATATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGC

Sequence 618

GCCGGGCAGGTACAGATGGGGTTNCACCGTGTTAGCCAGGATGGTCTCGANTTCCTGACC
TCATNANGCATCCANCTCGGCCTCCCAAANTGCTGGAAATTACAAGGGCGTTGAGCCAC
CCGACCTGGGCCAGAATCTTACATATTTCTTAAACATCATTAAATATATATTGATTTT
TACTTTTTTTTGAATAGGGGTCTTGCTATGTTGCCAGGCTTGGTTTTGAACTCCTGG
CCTTNANGAGATCCTCCCGCTCTCAAACCTCTCAAAAGCAATGGGTA

Sequence 619

AGGTACCCCATTTTATGCCATAAGTCAGGTTTCTCCCTCAATAGCCCTTTGGAACCTCTCA
AGGTCCAGAGTGGCATCAAACCAACTGACACATGAGTTGATACATCATGTGCTGCCAACA
GAGAAATTAGTCTGTGCCAACTCAGCACAACTCCTGCAGTTCAAACCAGAATTTCAAAA

Sequence 620

ACCAAGATTTGAATCATGCTTTCAAAAGCTAATGTGAAGTTAGACATATTTGGTTTCATA
ATCACAGAATTTTAAAAACACCAGGTCTGCAATATTAGAAATCACCATTAAACGCTCTCT
TGACACATACAATCAATTTCACTTTAGATCGCTGATTTTCTTAACAACTGATTTAGTTAT
TTCTGAATACTGCTAGAAAATTCAAAATCTACAATTAAT

Sequence 621

AGGTACATCACCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGT
CAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTG
GTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTGGTGGAGCAAGTNTTT
CTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGAC
ATCCATGTGACAGAAATGGAGTCATNAGTTTATCAACCAACAAGCAGCTCCAGCACCCAG
CACTTCTACCTGAATTTACCATCACCAACCTACCATATTTCCAGGACAAAAGCCCAGCC
AGGCACCACCAATTACCAGAGGAACAAAAGGAAT

Sequence 622

NCCGGGCAGGTAAGTGGATGACAGCAAGTGCACACATCAAGAGAAAGTTACCATTGAGAGG
TGCAGTGAGTTCCCTTGTCCACAGNGGAAATCTGGAGACTGGTCAGAGGTAAGATGGGAG
GGCTGTTATTTCCCTAGGTCATCTCTTACATTCTAGTTCTGGTGTCTCTATCTGTTTA
AGACAAACCCTTGNGCACCTTTCTCCACCCCTCCCTTTCTCCCTTGTCTCCCTTGAGAA
AACAACCTNCAAGTTCTCTGCCTGCACCATGACTGTGATACGCGGGGGCAGTTCGGCGGTC
CCGCGGGTCTGTCTCTTGCTTCA

Sequence 623

AGGTACAAGCTGTGCACTGCAAGGTAACCACGTGGCCAGAGGCACATCCCTCCCTCACAT

TABLE 1
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ATACTGAGTGGTGTAAATGCAGTCACCTTGTCATCTGGCAAGAGGTGATCGATGGACACAA
ACTCCTCCCGGAACTGCCCCTCCAGCGAGCTCACTCTGAGGTTATCTGAACTCACATAGC
TTGGGAAACCCAGCTGGGCACGGGCAACATTTGCGTAGTGACCCTTCCAGTCATCGGAGC
ACATGGTCTTCCACGAAGCAGCTGTGAACACCTGGAGCACGGCATTCTGACCACTCACCC
GGACACAGCGGTACCTGCCCGG

Sequence 624

CGGGCAGGTACTTTGCAAGACACGCCTGGCTACGAAACAACATGGGACAATGGGCAGCCTC
GCTGCACTGNACAGAGGAAAGGAAAGAGGCCTTGACGCCACTGCCTGGGAAGGAGCAGCA
CATTCTGCATTAACCAGGCATGCCTCACTCACTGCAATCCCCAAACAAGCCCAACTCTCC
GTGTTGATTATTCTTACCATACTCCACCAGAAAGCAGCATGATTTTCTGTCCTCAAATAC
TTCAGATTCCAAGAGAACTGCACCTTCTAGAGTCTCTACTGATAACCTCAGNCACTTACC
CACTTGAAGCATNAGCACACACTTAAAAAGGAAA

Sequence 625

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATATTCTTCCAACCTTTCT
TCTGTGCATAATCATCTAGGTGTGGTGCTTACATTTTCTTTGGCAGTGTTATCTTAGTA
TCTTCCAGCATGGTTTTCTCACCTGATACTGTAACCATACTTCCATATCCTCAAATGTGT
TGTTTTCTAAAATAACTTTTTTTTTCTTTTTTTAGAGACGGAGTCTCACTTGGCCAGGTG
CGGTGGTTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGTGGATCACGAGGT
CAGGAGTTCGATGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCAGGTGTGGTGGC
GCACGCCTGTGATCCCAGCTACTCGGGAGGCTGACGCAGGAGAATCTCTTGAAGTTGGGA
GGTGGAGGTGCGAGTGAGCCGTGATCGCGCCGCTGCACTGCAGCCTGGGTGACAGAGTGA
GACTCTGTCTCAAAAAAAAAAAAAA

Sequence 626

AGGTACGCGGGACATACTCCCTAGGTGTCTGTGAGGATGGTGGAGGGGATTTTCTCCATG
CCGGGAGGCTTCTGAGCAGGTGCTGCCTCTCGTGACTCTTGAAAGATGCTTGTGAATA
AAGCATACTGGGAGCTGAGCTGCTGTTAGTAATTAATAATCCTTTCCATTGTTTAGAGC
TCAGCACCTTTGTGCATTATACGCATTCATTTTCGTATCATTGTTGAATTTCTCAC
TTCTGCTACTGCAATGTATGTCTACAGCTGACAAGTCTTCTTGGGAGCCCTACGTAGCT
CTTTTTTTCTTTCTTTCTTTTTTTTTTTGAGACGGAATCTTGCTCTGTCACCCAGGCT
GGAGTGCAGTGGCGCAATCTCGGCTCACTGTAAGCTCCACCTCCCGGGTTCACGCCATTG
TCCTGCCTCAGCCTCTTGAGTAGCTGGGACTACAGGGTGCCCAACCACCGCCTGGNTAC
TTTTTTTGGTAT

Sequence 627

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACTCTGCCATGAAGGT
TCTGGGGTGGAGAGGGAAGCAATGTATATCCTACCCATGGTGATTGGTCCGATGGAAGTC
ACATCCTGATGGGAAAAAAGGACTGAGCCAGAGTGGACTGTCTAAACCAAATGGGATAA
ACAAGCATGGCATGGAGCCAAAACAAATGGCTAAGTCAGAGGTCCTAATGCAGAAGGCTG
GACAACTAGGATGGTGGGGAAAGACATGAGCTTGAAGGACTTCCCAAGATAAAGCAGAAC
TAACCAGAAGAGCCTGTTATAGATTATATTGGGGGAGTTTGGGGGGTTTGTGCAGGGTG
CATCAAAAAGCACTCGCATGGAATAACATATCTTGACAGGAACATATGACAGGTAATT
GAATAGTTTGATTTGAAGTATGTAAAGACATGATCCTGATGGTAGAAGGATGGTACCTGC
CCG

Sequence 628

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTT
TTGGGACCGAGTCTCACTCTGTGCGCAGGCTAGAGTGCCATGGCGCAATCTTGGTTCAC
GCAACCTCCACCTGCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGA
TTACAGGCCCTNACCACCACGCCAGCTAATTTTTGTATTTAGNAAAGATGGGGTTTCAC
TGTGTTGGCCAGGCTGGTCTCGATCTTTTGACCTTGAACTTTNACATAAACTTTACAT
TTCCATGACAAAGTTTTAGCAGTAAGTTCCAAATTGGTCTTATTCAACTCCAACATTAAA
CTTTGTATGTACCTGCCCCG

Sequence 629

TABLE 1
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CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATGATCC
AGGATGTGATGGGATCTTAGGGCTTGGCTGGAAGGTTTCTCCAGTCAGCCATCTAGCAGA
GCTGCAGATCTGGGCTGGGCTGTTGGCTAAAGTGCTCTTACAGACACCTCATTCGGCTC
TTCCTTCAGCTTCTTCACTTATTTCTTACTCAGTCACTACTCAGCTCCTTGTCCATGTGT
CCTTGAAGCCATCCTAGGTCTTATTCTGATTCTGAATTCCTCAGTCACCCATAAGCTTCT
CCTTACCCCGGGAGTCAGTGGGTGTGTGTTCCAGGTGGACTTAACCATTCTTCTCCTTT
ATGATCCTTTCCCTTGGGTGGACAAGTGTGATTTGGTTGTAAGGCCATTTTCAAGTTGC
CTATACATTGATAAAAGAAATCCCACTAACGGAAGTAGACTGCATGCCAAATTCAGTGT
CTTTCTCCAGGGGCCAAGGTTGGACCCANAAGTGCATGGG

Sequence 630

CCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTATTGCTTCCTGGGAGAGCTGACCATGA
GTCAATTGGCCCAACAATAANTTATNAAATGAAAACCGGCCATCATCTGCATCTTATGAGT
GCACGTCATCAGAGATGTCCACTCCAGTTACAAGAAAGTCCTGAGGGCTTTCTTGGAGCC
TGANGGGCGCTGGAGGTGAGACCTGGAGGTGAGCAGGAGTTAACTAGGATGAGGGACNGG
CGCAGCATACAGGAAAAGCTGCCTGGGGGAGAAAGGACCAACAGCAAAGACTGAGAAAAA
AATGCTGTTGTGACCAGGGTTCAGAGCGGGCATGGAGGACTGAGGGTTCAGAGCGGGCAT
GGAGGACTGAGGGTTCAGAGCGGGCATGGAGGACTGAGGGTTCAGAGCGGGCATGGAGG

Sequence 631

CCGGGCAGGGTACTAAGGACAAAAAGACATTTATTCTCTTTGACCCTTGCTGCCAGNACA
GAAAATGACTTCACCCAAGGACACAGCACTTGCGGGTGGCCTTCTCCACCTCCAGCTATT
GCTTGGTTTCAGGTGACCACTCCCTTTCTCTTCTCAGGCCTATGGGTGGTAACAAGCTCC
CATCCACTGCTAGTCTTAGACATCTTTACTTTCTTGATTGATNCCCTTGACTCTGCCCA
CATCTTTTAAATATCCCATATTAACCTTTTACACCCCTTTGAATGTGTCCTGCTTCCT
GCTGGGACCATGACTAGTCTCTTCTAGTNGGAATCCATATCACCTTCTGTGATGTAGTCT
CCAAGTCAGGCAGNCTCATTCACTACAGNCTTTCTTTATGCTTCTCTTTTCTTTCT
GGACTCTTACCTTTCTTTTATTCTTACTCAGCAACAGTGTCTGCCCATTAATAATGCACC
TTTGCGGNGGNGGTTNGGTATCTTTATCTCTCTTATTCTTCTTCTTCTTCTTCTTCT
ACTGGCATTGCATGGGAATTTTGGTT

Sequence 632

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACATACTCCC
TAGGTGTCTGTGAGGATGGTGGAGGGGATTTTCTCCATGCCGGGAGGCTTCTGGAGCAG
GTGCTGCCTCTCGTGA CTCTTGAAAGATGCTTGTGAATAAAGCATACTGGGAGCTGAGCT
GCTGTTTAGTAATTAATAATCCTTTCCATTGTTTAGAGCTCAGCACCTTTGTGCATTCAT
ATTACGCATTCATTTTCGTATCATTGTTGAATTTCTCACTTCTGCTACTGCAATGTATGT
CTACAGCTGACAAGTCTTCTTGGGAGCCCTACGTAGCTCTTTTTTTCTTTTCTTTCTT
TTTTTTTTTGAGACGGAATCTTGCTCTGTACCCAGGCTGGAGTGCAGTGGCGCAATCTC
GGCTCACTGTAAGCTCCACCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCTTGAGT
AGCTGGGACTACAGGTGCCACCACCACCCCTGGCTACTTTTTT

Sequence 633

GCCGAGGTACTTCCCTGAGCAGTCGAAGTGGATGCCAGACCAATGGCCAGNGCTAATAT
NCAANGCAATGATCCCAATGACGATGATTGGAAAAAATCAATGGCAGCAGTGACAGGA
TCTGTGCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATTTCAAATCATCAAGGC
CAAAAAGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGATCATTTTCCCCATGG
TGACTATTTCAGGACCTCTGACATCCGGCTCCGCCTCCACCTCTACCTCATAATTCCCGA
GTCCCAAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCACAGTGTTACTGGCTTCC
CATAAACACAGCCCTTTCTGGCTCACACGGGCATGACCTAATTAAGAACCCCCGCGTAC
CTGCCCGGGCGGC

Sequence 634

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAAAGTGA
AATCCCTAAGTCAAACTGTGGCTTATAAGCAGAAATCCTGGTTAGTATTTCAAAGTTCTC
TTAGCGTTTTCTCCTGCGACTTAAAGACTTAAACAGTGAAGAGACATGGACGTAAGAC

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TCCAAACAAAAATACATTTCTTTGAAACTAAATAGCTCTTAAGTAAGAAAAATTTCTATA
GATCTTCAAATCATCCCCTAAGCAAAATATTCTCTAATTAAGTATTTCTGTATTTCCATC
TATGTTCTTCCCAGGCTTGGGGCTGTTGATCAGACCTATTTTTAGGGGTAAAGTTTCTAGG
GGTCATAGAAGATACAGATTTTGACCTGCTTAATGTCAAGAGGTTGCACGGTTGATTTGT
CCAGTTGTGAATTTCTATGAATGAAGCTTTTTGCTTAAATAAAACGATATTCCCCTCTGGC
TGCTGTGAGCACCGGGAGACTTGTTTCGGCAGTGCCTGGGTGCTGGGGCAGGGCCCCG

Sequence 635

TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGGGAGTAAAAATAAAAGGGTGC
GATTTTGTAGGATTCTAAGGAAGAGGCAGTGTGCTCTGTCCACAGGCTGCAAGGTGAGAA
CCTAAAAGAATGAGATATATTCCCATTTTGAATGGCAATCAAAAAGAGGATCTCTCTGT
CAAGTCTTTACATTAATGCTGAGTAACAATCTCAAAAGCCTGCCATTCCCCTTTAGACA
CATGTGGCAAAAAGCAGAACTGAAGGAATGGCCAAGGGGCTTGAACAAGTAGAGAGACCGA
CAGTCTTTCAAATTTTCAAGGAACCCAGATACATTTTGGGGGAGCCACTGTTTTCCCAT
TTCCTGAAAAGTTCTTGCAGGTATAAGAAATAGGAATAGAAATTGAATAGGTTCTGGAGC
CAGGGCTACAAAGGCCCCAGCTCTGATCTGTTAGACTGAAAACACACATCAGATGAAAT
TATATNCACAAAAAGGAGAGTCCCTTAAAAACAGCCATTTCCGTCCCT

Sequence 636

AAGAGCACGTATAGCATGGGGGAAAGAACCTAAATGTCTCTCTGTCTGTGAGCTGGTGA
AAAACCCAGCATGAGAACGCAGTGTGAGGTGTGGGACTCCTTCTGCCCTGCAGTGGGTG
TTACGGGCGGTGTGCCCTGGCGAGCAAGCTTTGATTCTTGTTCTTTGAGCTCGTTTCAG
AGGCTGAGTCCCCACATCAGCTTTAGTTCTTGGACTTCCCTGTATTAAGCAAGAATTAGG
AGAATGGCTGTCCCTGCAGGCGCCTCCCGTAAATCCTGAGCTCTCTGGCGCAATCTGAAA
CTTCTCTTCTGTTTTCTTTGGCTGTATCAGCCGAACCAGGAGAGGCC

Sequence 637

CCGGGCAGGTACCAGGAGAGATCTGAGACANGGTATGAAGTAAAAGATTTAAGATTGGAA
GTGGAGAGTGTCTATGGACCAAGTGCCTTTCGGATGGGTGACTTCTGGAATCTTGTTAGGC
ACAGCGGAGTTGGTCCCTGTGGGAAAGGAAGAATATTTCCGGGGTGAAGGAGACTTCGGGG
TGTGGGCCCGGTGCTTTTAAATTTGGAATGGTGTATACAATAGGGAAAGGATGTTAAC
TTTGAGCAGCGGGGATGGTGAATATAACCTGATAGGGACCCTTCCATTTTGTGGAAAG
GGGAGGAGGGGTGTGCTACCCAGACCCAGTCTCCTGGNTGTAAGGGTAAGAAAGTGAATT
GGGAAGAATCCTCAGG

Sequence 638

CCGGGCAGGTACCTGGACTCCTAAGCCTCAGGGATTTACTGAAACACCATTCTATTTTAT
AATAATCCTTAACCAAGAATTTAAGGATCTTAAATTTTCTGTGGTTCTATTGTTATCT
GATATATAGATGATCTGCTGCCATATCCTAAAGAGCAGATGAGGCCGGGTGAGTGGCTC
ACGCCTGTAATCCCAGCACTTTGGGAGGCAGACGAAGGTGGATCACCTAAGGTCAGGAGT
TTGAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAATTAGC
TGGGTGTGGTGGTGGGCACCTGTAATCCCAGCTACTAGGAAGGATGAGGCAGGAGAATCA
CTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCTGA

Sequence 639

AGGTACCACTTAACAAGGGTTCTCAGCTGTGNGGNCACTGGACCACTGGGATATGCTGAG
CTATTGCTTAAACACTGACTTAAATAAAACAAATATTTTAAATAATGAGAATGCTACTGT
AATTAGAAGGCAATCATTTCAAAGTCTANATGGAGGCCAGGGGCGGTGGCTCATGCCTGT
AATCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATCACATGAGGTCAGGAGTTTGAGACC
AGCCTGGCCAGTATGGTGAAACTCCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTG
GTGGTGTGCACCTGTAATCCACTGAGGCAGGAGAATCACTTGAACCCGGGAAGTGGAGGT
TACAGTTGAGCTGAGATAGCACCCT

Sequence 640

AGGTACAAAGGTTTCAAGTGGTGAAGAGGGAGCAAGGCCTTTGGAATAATGAACTCCAGT
TGTTCCCTCATAGGTGCAGCAGAAATAGCGAGAGGTCAGGATTATGGAGATTGGTAAGGCG
AGATCATCCAAGGGCCTTTTGCCTGGTAAGCCATTTTACTTTAATCTTGAGTGCCATAGG

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GATTCATTGACGGATTGATACAGGGAAATGAAATGATTTTTTTTTTTTTTGGTTGGGGGA
GACAAGAGTCTTGCTCTGTTGCCAGGCTGGAGTGCAGTGGCACAACGTCGGTTCAGTGC
AGTGTCTGCCTCCAGGTTCAAGCAATTCTCATGCCTCAGCCTACCTTGTAGCTGGGATT
ACAGGTGCACACCACCACACCCAGCTATTTTTTA

Sequence 641

AGGTACAAAGGTTCAAGTGGTGAGAAGAGGGAGCANGGCCCTTTGGAATAATGAACTCCAGT
TGTTCTCATAGGTGCAGCAGAAATAGCGAGAGGTCAGGATTATGGAGATTGGTAAGGCG
AGATCATCCAAGGGCCTTTTGCTTGGTAAGCCATTTACTTTAATCTTGAGTGCCATAGG
GATTCATTGACGGATTGATACAGGGAAATGAAATGATTTTTTTTTTTTTTGGTTGGGGGA
GACAAGAGTCTTGCTCTGTTGCCAGGCTGGAGTGCAGTGGCAACGTCGGTTCAGTGC
AGTGTCTGCCTCCAGGTTCAAGCAATTCTCATGCCTCAGCCTACCTTGTAGCTGGGATT
ACAGGTGCACACCACCACACCCAGCTATTTTTTATAT

Sequence 642

AGGTACCTCGTTTCTGAGGATCAANACCTNAGNGACCGNGTGTGTGTGTGTATTTGTG
TGTGTGTGAGTCCTATTTGGGCCCCGCCTTTCAGCCCTGTCTGCAGC

Sequence 643

AGGTACTTTCAATTTCTGTGGGATAAACTCCAGCTCCAGTTTCAGAACCCACTCTAATTG
GTTTAAGCCAGGAAAGGGAGAGGGACATGTTGCTGGGAGGCCCCCATCTGGGGCCTGAGC
TTGGAATCAAATCAGAGGAAGGCAACACATGTAAAGTGCTGAGAGTGGAAGGATGAAGAG
AGCTAGGGCTTTGTGCCATCACTCGTGCTCTGGACATAAGTGGAGCTGGGATTCAGCATT
ACCTGCCCTGTACCTGCCC

Sequence 644

CGGGCAGGTACTAGTCCAGGTGTGAGATGAAGGGGGCCTGGATGAAGCAGAGGGTGAGAG
ACAAGGAAGATTCTGAGGACCTTGTGGCTAGATGTGGGGGTTAAGTCAGGTTCAACTCCT
AGGCTGGATGAATTGGCAGATGGCACATGAAGTACAAGAGAATGGAAGGCAGAACCTATT
TTGTGGGCAAAAAATAAATTACATTTTGAATACTGAATTGAGGGGCTTCTTGGAAGTCC
AGGTGTAGATGTCTTACAAAAATAGAATATTCTGGGCTGGGTGCAGTGGCTCACCCCTGT
AATCCAGCACTTTGGGAGGCCAAGGTAGGGGGATCACCTGAGGTCAGGAGTTCGAGACC
AGCCTG

Sequence 645

GGNACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCAC
CAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGA
CCCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCT
GGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCA
ACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACC
ATATTCCCAGGACAAAGCCCAGCCAGGCACC

Sequence 646

CCGGGCAGGTACAGGGGCTTGGGGGCTTGGCCAGGCTCTTCTCCATCCATGCCACGGGGC
TGACAGCCACAGATCTGGAAGCTCAGGCCTAGGAGTGCAGGCTCCGTTAAGCCCTGTGTC
CAACATCCTGACTCCTAGGGGTGCCAAGATTTGAGTGGCCACTTTCACCTCTGGAGGAA
GTAATACCTAAGGCGCTGATAGAAATAGAATTCCGCTGCCAGGCAAGGTGGCTCACACC
TGTAATCCTAGCACTTTGGGCAGCCTCAACGCAGGTGGATCACTTGAGGTCAGGAGTTCCG
AGACTAGCCTGGCCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAATTA

Sequence 647

AGGTACNTGTTTCAGTCACTGGGCTGANNTGGNNACAGCACAACTTCATAGCCACTGT
ATGAAGAAGTANAAGACCCAGACTCTTGCTTTATGTTGGTATCAAAAGTCATTTAGAGT
CAGGCTGATCACTCCCAAGTAACCCACTGACTTCTTTACTCCAGCTCTCTGTCTGCTGNT
GACTCANAANGTNACACTTNATTTTCTCCATTGCTGATATAATCATATCTGCAACATAAA
AGTGGGCATTTTCTTTTCTACATCAACAGGCAGCACAAATACCTCTGGTGAGAAGGAAT
TCNAAGAAATGGTTNTTCTACTGACTTGAACAGCACCTTCATCAGCAGCAGATGTCAGAT
GGGAAGGC

TABLE 1
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Sequence 648

CCGGGCAGGTACCACTAGATTGCCTCCCTGTGCCTGGGCAATTTAGAAAATGGTGGTTT
TCCTTCGTTTCCATCTTTTTTAAGACTTAAAAAGTATCTGCTCTCATTTTCTCCTAGCG
GCCTCCATGCCTTGACTCAAAAAATGCTGTCTTAGTTGACAGCCTTGAAATGAGTATGAC
CCTAGCTCTAGTTGGGTGGAAATCACCTCGCATAGAAATAGACCTGGAGGGCCGGGCACG
GTGGCTCACTCCTATAATCCCAGCACTTTGGGAGGCCAGGTGGGTGGATCCCGAGGTCA
GGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAAAAAAAAAA
AAA

Sequence 649

AGGTACTAGTATGAAGGAAATAATATCCACACACTGATACTGGTCCAGCNGAAACCAAGA
CCGCTCCTGGTGCATTAACTTTTAACAGAGCANGGACTCANTTCTCTGAAAATAGTGCCA
TAAACATGTGCTCCCAGAAGAATAAATATTTGGCTTGCTAGAATTTCTGCNGCTTTTNT
GTAAAAGTTGATTATTCGGTATTAAGAGGAGTATCAAATATGNGTNNATGNANNAAAAA
CTTGAAANAGTANNGGACCNNGGCTTATCTCNTCATTTTCATTCTGCACACTNCAANTC
ANTCNTTTTCCCATCTTNTTCCCNTCTCTGNAATTTATCACCTCCCCCTCT

Sequence 650

GGCGATGGACTCCACCGCGGTGGCGGCCGAGGTACTTACCACAGAGAAAAGCCAATAATC
ACAATATATGTTGTCTTACTGACCCATAAOCCTTTTCTGAGGGTGGCAGGCATTGTGCC
CCCCTGTGAGGTGGGACTATATACATATACAAAGGAGGTGTTAACTGGGTGGCATGTC
TCAGGGAGATGTAANGACTTACCTGCATATCCTGGCAGTNTTGAAATGATAGTGAAGTGT
TCNTANGGCNTCCNCTTGATGGCATAGNCNAAACACCAGNATTTTCTTGGNAGAATGATT
CGGNAATGCTACATAGAAGAAATGGNTGGTGAGCTNTTACTGTGACTGTGCCCATAGTA
AGTCATCCTGGACCTCTGAATCTTATCCCAC

Sequence 651

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTGTTTTTTTTTTTTTTTTTTT
TTTTATGATATTCATCTATGAACCAATTTAATTTAATTTAAAAATGACTTCTGATCTG
GCAGATGATTTGGGTTCTAGAAAGAAATTTGTCCAGGCATGGNGGCTCATGCCTGTAATC
CCAGCACTTTGGGAGGCTGAGGNGGGAGAAACCTGTNAGCTCAGGAATTGGAGACCAACC
CTGGNAACGTAACAAGACTTNTTTTTTACAATATTAATAATAAAAAAAGGCCAGGTGCCG
GNGGTTACACCTGTAATCCCAGCACTTTGGGAGGCCACCAGACAGGTGGATCATNAGGT
CAGGAGTTCGAGACCAGCCTGGCCAACGTGGGGAAACCCTGCCTNTACTAAAAACACAAA
AATTATCTTTGCTTTGNTGGCGGGAGGCTNTAATCCAGCTTCTAGGGAGGTTGAGGCAGG
AAAATCNCTTGAATCTTGAAAGCAAAANTTNCAATNAGCCCNGGTACACCATTTGCCTT
CCAANCTGGGCAACAAGAGCCAAATTTNTTNAAAAAAAAAAAAAAAGGGCCGGCCTTGG
GGGTNNTCCNGGAACCCACNCNTTNTGAGGCCCAACCGGTGGTNNTAGGGNCGAGTT
CAAAACNNCCTTCCACTTTTNGAACCCGTTTTTTAAATTCAAAAATTNCTGGCTGGATA
AATCCGNAGCCCCTTCTTGNNGGTGNGGNNGGANTNTTCCCNCANNGGGGTGGGTNA
NNNCCGAAANCCCTTATTTCCCCTNTGNAAGGGNCTTTTCAAAAAAAAAAAAAA
Sequence 652

CCCGCGGTGGCGGCCCGCCCGGGCAGGTACAGGTAAGGCAGAAGGAAGGAAGGGCAAAGA
AACAAATCCAGGGCCCTGGTTTCTGGGATGACAGGCTTCCAACACTCATGCCAGGACTA
TTTTCCACCTCGTTTCACTATGGGTTTTTTTTCTTTTTTTTAAATAATGAATTTTTAA
AATGTGTGTTTGTGCCCAGATTATCCANAAAGAGTTGAAGGGAGGAAAGGNGTGCNTG
GGGTGCNTGGGANTTTTANCCCTCTNTCCACCCNGATTTCTAAGTTGGGGGGGGCATCCA
AACAGCTTCACCANGTGCCAGGCTNTTTTTTGNNTNTCAAAGCCAACCTTCCAGGGC
ANGGANGGGTGAAGNTTAGGAGGGCAAAGGTTAGCCTGGAGGCTGCAATTAACAAGAATC
AAANTGGGGTTAAGGATTCTCACACCCAGTTTGCTAATTTAGCTGGTCTTGTAGAGG
TGACACCTAGTAGGACAACATGGNTTTTNGGGCAGGGCTGGGGTGCTGGTCTCTGCTTTC
TAGGGTAGAAAGGAATCATACATTGAAAATGCTTAAATCGATGGAATGATTTATGTTCTT
NATCTTTCTCTTTTTCTGNGTGGCTGGTTTTCTGCCANCCTTACTTGGACAAGCACCAT
TCTANACCTTTCTNTAGGCATNTCCNAGAANGNGAAGTNGAAAGGAAGAAAAAACTT

TABLE 1
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ATTTTTTNNNGNCCAAAAATTNGGCAAAAAAAAAA

Sequence 653

TCCACCGCGGTGGCGGCCCGAGGTACGCGGGGGCCCTTCTATCTCAGGATGTTTGCACCT
GCTATTTCCCTTTCTTAAAGGCTCATCCCTAGATATTTGCATGACTGGCTTCCTAATTTN
NTGTAAGCTTTTGCTGAGAAGTTACTTTACCAACTGTCATTGAGGTTTTCCCTGAACATC
TTAGGTAAGATAACAAGCTCCCTCCTTTCTTCTCACTTCTTGGTATTCCTTATCTC
GTAACCTTTTTTTTTNNGGGGGGATNGANACTTNCGTNTTGNTTTTGTTGGCCAAGCTTGA
GTGCANNGGGTGCANTCTTGGCTTNACTGAAACCTCCACCTCCCGGTTTAAAGCGATTCT
TTCTGCCTTNAAGCCTNCCGAGTAGCTGGGACTACGGGCAAGTGCCACCACACCCAGCTAA
TTTTTTGTATTTTAAAGTAGAGGTGGGGTTCACTGTGTTAGGATGGTCTCTATCTCCTGA
CCTTTTGGGCCACCCACCTCGGCCTCCAAAGTGCTGGGATTATAGGTGTGAGCCAGTGCN
CCCGGCCTCTCATAATTTTCTTAAATT

Sequence 654

CNAATTGGAGCTCCCCGCGGTGGCGGTGAGTNGTCTTAGAGATACCCATGAGGTACCT
ACTCAAAATGGGGCTCAGAGTAGCCTTGTCCTTCTTGTCCAGTGGGCGCAGCTACAGT
CTNNCTGGNNNGGAGTGACTGGAGGCTGTCCCCACGTCCCACTTCAGTGAGGCATTCTATG
TGCACCCAGCACACTTTCTAGCTTTATTTGCCTGGAGGGGAAGATTCTCCAGAACCTTGT
TAAGATGCACAGNNGGGGCCCTTGGACTGGCAAGTGTGGCCTTNGGCAGTCCCTNGGAGC
TTGTTAGGAATGCAAAATNTTAAGCTTCTTCTACTGNATCTAAAGGTTGANTTTAAACA
AGATCCAGCTTGTTTCGTTTCACATGAAAGTTGAGGCACACTGCTCTAGAAAGTTCTTTT
ATCTTTACTGGCCACCAAAGTAATCAAACCTTTGNGAAGTACCCTCGGNCCGCTCTAGAA
CTAGTG

Sequence 655

GCTCCCCGCGGTGGCGGCCCGCGGGCAGGTACGCGGGATATGAAGTGAGGTTAAGTCAGA
TGGAATGGCAGTGGACTACTGTTTTGGTTAATAAATCGAGATACCCTTAAGAGTTGTGN
NCTGAACATACTGTCTTTCTTCCCGAGTTCATGTACAGCACCTGCCTAATAATAGGT
GCTCGAAAAACATCTGTTGAATGAAATGAATTCTTTGTTTGCAGTAGGGCAAAGAAGGG
TAGAGAGGAACNACTTTGCCAAGCTGATNTGTAATGTTGCAAAAGGGTTTNGGCCAGAA
AATTCNANAACCCATTNGAGAGGCAATACATGTTAAGGGACCTNTAAGATGTTTCACAA
CCTTGGAAATAATTAAGAACTTTCTACTGNTTACTTATTTCCCACTCCTGGCTGCC
CCTCTGGGTGGAATGCCTNCTGTTGGAGGGAATACTGNGTGAGACACATCTTTTAGTAA
AACAGAAATGTGAAACCAACTTGCAAGAACACAGCAGCTGTTACCAAATAGGTCTTG
ACTGGCTCCCTTNTCTGGGGGACAAATGTTTTGATAATGTCTGTGAGTAGATTGAGTCCC
TATTTCTTTTAAAGACTTGATATTTAAGAATACTGGTTCTTTTTTGGCCAGCATCGCAAN
GAAGTTTTCTTTAACTTTTGGGCCAAAAAAAAAAAAAAAAA

Sequence 656

CGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACAGGATGTTTTCCTAAATTTTAAGT
CAAATTCCTTCTTGACACATACCTATTTTTATTTGTTTGGTTCTCATCTCTGTGAACA
GAGCAAAGCATGCAACCATTGTAACACTTTCATTTGTTTTATAAACTCAAGTTCTAGAG
TTGGATTTTCATGATTTGCATAACTCGGCATAGTGTAAGTGCTTGTAGTTTTAAACAGAAA
AAGAGGGAAGAAATGACNATTCANAAAAAAGATCAAATCTTATGACTGTAATTTATTA
AGGNATCCAATGGAATCTTTCCCTTTTCTTTCTTTTTTTTTTTTTTAAAGAGACAAGC
TCAAGTTCCATAAGCTGGGAATGCAGTATCATGATCCATAGTTCACAGCAGCCTTCAACT
CCCTGGGGTTCAAGGNGATCCTAAGAACTTGNNGGCCTCAAGCAGTCTCCTGCCTCAGC
CTGCCAAAGTGCTGGGGATTACAAAGCATGAGCCACTGCTCCTAATTCTTAAGAGATA

Sequence 657

GAATTGGAGCTCCCCGCGGTGGCGGCCCGGGCGCGGTGGCTCATGCCTGTGGTCCCAGAAC
TTTGGGAAGCCGAGGCGGGCGGATCACGAGGTGAGGAGATCAGGACCATCCTGGCTAACA
CGGTGAAGCCCCGTCTCTACTGAAAATGGAATAATTGGCCGGACCGTGGTGGCGGGCGC
CTGTGGTCCCAGGTGGCTGGATACACGGGTGTGCACCACCATACTGGCTGATTCTTGTAT
TTTTGGTAGAGATGGGGNTTGGCCNNGTTGGTCCAGCTGATCTTGAACCTCTGCACCTG

TABLE 1
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CCTNGGCCTTCCAAAGTGTTGGGATTACCGGTGTGAGACACTGGCCCCCTGGCTATATTTT
ACTATTTGGAAATCACAAATGCATCTTAAAATTGATGGCTTCTTGCAACCACTTTCAACCA
GGTGCCTGTCATGATTTAAGTGCTAGCATCAAGGCAGGTTAGTTATGAAGAAATAGAGTG
TGTGTTTATATACTCACACAGTTAGAAATCGACCCTTTTAAAAATTATTTCTTTTGAAA

A

Sequence 658

AGCTCCCCGCGGTGGCGGCCCGCCCGGGCNGGTACCGCGGGATATGAAGTGAGGTTAAGT
CAGATGGAATGGCAGTGGACTACTGTTTTGGTTAATAAATCGAGATACCCTTAAGAGTT
GTGTTCTGAACATACTGTCTTTCTTTCCCCAGTTCCATGTCACAGCACCTGCCTAATAAT
AGGTGCTCGAAAAACATCTGTTGAATGAAATGAATTCTTTGTTTGCAGTAGGGCAAAGA
AGGGTAGAGAGAAAANCAACCTNGCACAAGCTGNTTGTNAATGTTGCAAAGGTTTAGGC
CAAGAAAANTTCNAAAACCCATTNGAAAAGCATACATGTTTAGTGGAACCTTGAAAATGT
TTTCACAACCTTGGGAAATAATTTAAAAGTAACTTCTACTGGTTTTACTTATTTCCCACT
CCTGGCTGCCCTCTTGGGGTGGGACTGCCTCCTGTTGGGAGGGGAATACTGTGTGAGGA
CACATCTTTTAGTAAAACAGAAATGTGAAACCNACTTTCAGAAATCACAAAGCACACTGT
TNCCAATTAGCTTGACTGGCTTCCTTCTGTTGGGGGACAAATGTTTNGATAATGTCTGTCA
GTAGATTCAGTTCCCTATTTCTTTTAAAGACTGATATTTAANAATACTGTTTCTTTTT
GCCACCTCGCANTGGAAGTTTTNTTTACTTTTGCCAAAAA

Sequence 659

CCGCGGTGGCGGCCGAGGTAAGGATAGTCACATAGATCAATGAAAAAGAACA
GAGAATCTGTGAACAGACCATGCAAATATGCCTGCCTGGTTTTTCAACAGTGCAAAAG
CAACTCAGCCAACAAAAGACAGCTTTTGGCCAGGCCGAGTGGCTCACTCCTGTAATCCC
AGCACTTTGGGAGGCCCGAGGCGGGTGGATCAACGAGGTCAGGAGATCAAAGACCATCCT
GGCTAATATGATAAAACCCCGTCTCTACTAAAAAACACACACCCCAAATTGCCCGGTG
TGGTGGCAGGTGCCTTTNGTCCCACTNCTTTGGGANGGTTAAGCAAGGGANAATGGCNT
TGAACCCGGAANGGAAANCTTTGCCNTGGGGCCCANATTTNNNCCNTTNNNCTTCANCT
TTGGGTGNANAAAAANCNGGACTTGGTTTCAAAAAA

Sequence 660

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTTGAAGGTGAGCTTTGAA
GATGCAACATGAATTTGACAGTANAGATGTAGGGAGGAAGGAAGGCAGGACAGGTCAGAC
AGAAGTGCAGGAACAGCCCAGGCCTTTGCAGCCTTCCCACACCCCTACAAGACCTGCC

Sequence 661

ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCANGGTACGCGGGGACT
TGACTTAACTCTGGGGCCCGGGAGGCCGCGGTTTCTCCCCGCTTGCCGGGGTGGTCC
TCTTCCCTTTGTCGGACCAAAGAAGTAAACACTGTGTGGAGAGGGACTGACGTGTTTGA
GGGAAATGGGAATGTACCT

Sequence 662

AGGTACTCCAAGCTCTGAGACCACTCTTCTGCAAAGCCTTCTGATTCTGCAAAGAACA
GGTAGGCATTTTCATCCTTGGGACCTCACAGCAATTCAGGACACATTTGTGTCCCAGCCCT
GCTTGGCTTGGCTGTCTCCATGAATATACACTTTGTAACCTTCTGCACCAGGCATCATACC
AAGCACACAGTAGGCACTCCTGTGTTTTTGAATAAGTGACTATATCATCACCACATTTT
AATGCGGAATATATGAGCTACTAGAAAAGACATAAGGGTAGATTTTACATCTTTATTGT
ATCCTAGATATACAAGTCTATTACTGCCTTTTCCCATGTTCTGTCAACATAGCATAAAGA
ATGTGGATTACCTGTTAGAAATTGAATAAGCGGCCGCTCTAGAACTAGTG

Sequence 663

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGTTACACGGCAATTT
TNTTAATAACTCCCTTTACTATGTCAGACAAGCTATGTCAAGCGTCTTCTGTATCCTNTA
CGGGGAAAAAAAAAAGTTAACCAGAGCCAAATGCTTGCTTCAAAGATAACTTGCCATC
CTGAAAATATAATTTTACAATTCAATAACACCTTTTGAATAAATAATNTGGCAA
AAATGCCCATGCATTAAACAAACCATTTTTTCAGTTTAATCTCTTTATATGTTCAACTTTG
ATGTATTTTAAATAAACAAAGCAAAATCAACTAAAAATACAATCTGGATTCCATAGCCA

TABLE 1
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ANGGTTTTATTACAAATTCCTANTAGGAAGGCTTTATTTTTAGCTNTCAAATGGGGNNGG
ACCTATAAGGGAAATTTAAACCGTTTNCNTTGAGTTTTNTNTTNAAGGGGAANGGGGG
AGGANTTCCCAAAATGGGGAAAGGGGAAAAAAGGGGNAANNCCNTTTTGGCCTTTNN
GGNANTTTTAAAAAAAANTTTNCCCCCGNGNCCCCCAAAAAAANNAANNTTTT
TTNAAAAAAAAAAAA

Sequence 664

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGCAGGTAAGTCTGCTGGTTTTCTGGT
GTTCTACAAGCTGCCTAGGTCTCTTTTGTCTCAGCAGTTCAGGCATGCAAAAGTTG
CCAGTTCTGTGAGCATTCCAAGTCAGGTAAGACAGAAAGCCATCTCTTAGGCAGTCCCCA
GAAAAGCTGAAAGGTTGGATATACTTTCTACTCTTCTCTTTCTTCATGAGAGAAAGGCC
ATGTGGGCATTTTCTCCCAATAACACTGAGTTCTGTTGTCTTCTGTGCGCTGTGCTGCAG
GTTCTCAGGTGCTGCAGTTAGCTGCT

Sequence 665

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGTAAGATTTCTGAAGGGATCCATAGCC
AAAACATGTTTGAAGGCCACTGGGCTCGCTAACTTCTAAAAGCACCCAGTTCTAGCAGA
CATCCTAAGGAACATTCCAGGAAAATTCCAGCCTAGAACCCTCCTGGGGTCTGACAACCT
TAGAGAACAGTGCTGGCTTTGAATGGGCTTGGGGGCAGCCTCGAAACCCTCTTCCAGTC
TCCATGCAGGCAGGGGAGCTCCTTAAGCAACACATAGGACATTTCTGGGAGAAATGGGAT
CCCCAACACAATGAACACTATAGATTTTAAATGGTCTATATGGTTAAATACACAAGGCCCC
TCATTTCCAACCCCGCCTGTTTCATCTGATTCATCTGTACCTCGGC

Sequence 666

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAAGTCTCAGACATTTCCCCAGTGGCT
GAAGTGGCATATGAATTATGAAGTTGGATCATTTGGAATGAATGTAAGAGAATTGCCAAG
GGCTCCTCCTACTCCAGAGAGGAAACCTCATCCAGGGCCATGAAGCCACTTCCTACCAT
CTGTGTGCTGCTTAAGCTAATGCTGCGGGAACCATGGTTCCTTGGGAGGAATCAAGCTGA
CTCTTGGCATGAGATTCTGCCTTCCTAGGGTTGAGAGCGGCACTGCCATGGCTTCTCTG
GACGACCCAGGGGAAGTGAGGGAGGGCTTCTCTGCCCTCTGTGCCTGAAGGATCTGCAG
TCTTTCTATCAGCTTCACTCACATTACGAGGAAGAACAACACTCAGGGGAAGGACCGTGATGT
CAAAGGGCAAATTAAGTAAGAGGCGAGGACCTTGCCTACCCCTGCTTGTGCTTGAGA
GCTTTAAGTCAAGGATAGTTCTTATCACTTTTGGTGGTGGCACAGGNATATGATAATTA
GTAGTAGCCAACAGATGACTAGTNGTTGTCATGTGCCAAGCGTTTTAAAGTTNCCTGTT
ATTAATTCATTA

Sequence 667

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACGCGGGGGAAGAG
AAAGCGTGAGGGCTGGGCCTGCGGCGGGCTTTAGGGAGTGGTCCCTGGCTGTGGATAGAT
CTGCTGATGAGTCCAGGCCCGGTCCATTCTCCTCGCGCTGCAAGGATGCTCCTGGGATT
TCGGAGAGGCCGAGGAGTCATTTCAAACACATCATCCATGGCCTTTTACCTGCAGCCAG
CGTTGCTCCGAAGGCAGCTGTGCCACGCACACCTCCTCCCGCAGCCCCAACCCATCTCC
AGAGAGACCAAGATCTGCTCTGGCAGCAGCCATTCTGGCGACAACATTGAC

Sequence 668

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAAGTCTGATAGGAGAGGGAGGAGGG
CTGGCAGCTGAGTAGCCAGAATCAGGCAGACGGTGGTAGCAGAAAGTCAGAGGCCGAGGGA
ATCAGGGAAAGGAGTTCAACCATGGAGGACCTTGCTGGCCAGGTTAGAGACTGTGGACTT
TTGTCTGGGTGAGACAGGAAGTCACTGGAGGGCTGTGACAGAGCTCTGAGGCTGTGAGGC
ACTGCTCTGTGAGTCCATGAGTGGGGAAAACAGGAGCTTGCTGCACTGGTAGAGACCAC
AGATAATGATGACTTGGACAGAGCAGCTGGGAGAGAACTAGTTCAATAACCCTAACACGC
CTCTCCATTCTGCATTTTCCCTAAAAATGTACCTGCCCG

Sequence 669

CCGCGGTGGCGGCCGAGGTACCTGCCCTATCTTGCTGAATGTTTTATAATCTAATAAAAC
TCAGATAAAGACCCAGATGTCACACCTGAACAGGAAAAGCTGAAAGGAAAAGATAATTA
AATATAAATCAACAGAATCAAGATTTTGAAGGACCTAGAAAAGTTGAAGGATTACTGAA

TABLE 1
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GCCAAGCAAGAGGAAATGATAGGATTAAGTAAATCTTGTGTTTAGATTTTTTTTTT
TTTTCAAACGGAGTCTCGCTCTGTCACCAGGCTGGAGTGCAATGGCGCAATCTTGGCTC
ACTGCAATCTCCATCTCCGGGCTCAAGCAATCCTCCCACCTCAGCCTCCCTAGTAGCTGG
GACCACAGGCATGCGCCACACGCCTGGATAATTTAAAAATATACATATTTTTGTAGAGA
CAGGGTGCTGCTTTATTGCCAGGCTAGTCTCAAACCTCCTGGCTTCAAGGCATCCTCCTG
CCCCAGCTTTCCAAAGTGCTGGGATTACTGGTGTGAGCCACTGTGCCGGGACATAAATAG
TTATGCTGTATTGGTTAAGGAATAATGACA

Sequence 670

CCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAAA
GGGCTGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCATC
TACATTTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGG
TCCTGAAATAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATT
CCGATCGCTTTTTGGCCTTGATGATTTGAAAAAAGTCCTGTTGCACCAGATGCAGATGC
TGTGCTGCACAGATCCTGTCACTGCTGCCATTGAAGTTTTTCCAATCATCGTCAT

Sequence 671

CCGCGGTGGCGGCCGAGGTACAAGGAAGGCCTTAAAGACTGCCCCACTCTCCTTGTTTCC
CATCCCCTGTCCCTTCTACTTCTCACATTCACTACTATGTGCCCTAGGACAAAATCAAAT
GTGGAACATTTGGTCATGTCTACTTTGTCCAAGGGTGGGAGTTCTTGAGGAATTCAAGT
GGAACTAGAACAACTTTCTACCTTTCTTCCCTTCTTCTCCCCACCTCTACCTAGA
AGCCCATCAATCACTTTGAACTTCTTGGAGAAAAAGGAAACAAAAGAAAAAGAAAGGA
GAGGCTGGGTGCGGTGGCTCATGCCTATAATCCCAGCACATTGGGAGGCCAAGGTGGGTG
GATCACTTGAGGTCAGGAGTCGAGACCAGCCTGGCCAAAATGGTGAAAACATGTCTCTAC
TAAAAATACAAAATTCTGCTGGGTGTGGTGGTGGGTG

Sequence 672

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACACTGGTGGGG
GAGAGTCCGACGCGCCTGGCTAGGAGCGCGACCGCAGGGCCTCTACGGACCTTACTAGA
AAAATGAAACCTGATGAACTCCTATGTTTGACCCAAGTCTACTCAAAGAAGTGGACTGG
AGTCAGAATACAGCTACATTTTCTCCAGCCATTTCCCCAACACATCCTGGAGAAGGCTTG
GTTTTGAGGCTTCATGCCAGAAAGGGGAATGGGGAATGGCTGCTTAACGGCATGTNTTTT
TT

Sequence 673

CGCGGTGGCGGCCGCCGGGCAGGTACACGATGAAACGGGGGTAAAGGAAGGAGAAGAAAA
ACATTGAAAGGCATTTGACAGGGTAAGGTTGTATCCCCAGACAACCCTGTCAAGCAGCT
CTGAAGGGATGATGAGCCTGGACTCTCTGGACTCCTAGATTATGAACTCCTGCAGTGGAC
CATGTCTATTTTTTGGAGGCGTTGGGGGGAATTGTCTTACGCAGCACCCAAGCACACTG
CTATGCAATGGACCACAGATAGGAAGCAAGCACTGCATTTGGCTCCCCCGCGTACCT

Sequence 674

CCGCGGTGGCGGCCGAGGTACTAAATCATTAAATTCATCCTGAGCTAGTGGCTTTATTAAT
GAGTATCTCACAAATACCACAAAATTCAACCTGGCCATGTGGAGCAATATAAAATTATG
GCATTTCTTGGTATGTTTTTCTTTTGGCGAGGAGACAACCTGATCTTGTGTTTCCAGAA
GCATGTAAATTTGCCCTGCTTGAGAATCTCTCTGGCTTGAAAGGAGATTATATTCATGG
CAGTCTGTGAATTTTCATTTTATTTTATTTTATTTGAAGACAAGAGTCTCACTCCAG
CCTGGGTGACAAGAGCAAGACTCCCGTCTCAAAT

Sequence 675

ATANGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGGAGGTACCATGAGGGGAGA
ACCGGCAAGGGGTGCCATTCTAGCATCTGGGTGGGAGAGAGGAGGCTGAATGCCAGGGGA
AACTTCTTGAAAAAGTGATGCTGAGTTAGGACAATTTAGTCAATGAGAAGGGATCTGGC
TGTTCTTGGCAGTGGAGACAACATNTTTAAAGGCATGGGAGAATATCTAAAATTTACCT

Sequence 676

AGATAATAACATCTGATATCCACATGGGGTCTGGAGGNGCAAGCCACCTTCCTTTCATCC

TABLE 1
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CACGGTCTCACAGCAGCCCTGGAAAGAGGCTGCTCTCTGTTGGAGGCTAAGGGCCAGTGT
TGGAAGGAGCTCGGGTGGAAAGTGTGGTCTGCATGAGGGGCTCCCGTGAATAGAGGAGAG
GGGTGGCNGGTACCTGCCCCG

Sequence 677

TACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCANGGTACCTGCCTC
TGCCAGATACCCCTGAGGGAAGAGGATGTTCTATAACCAGGCCGACAGGTTAGCATTGT
GAACACAGTTCTGACGTTGTTGGGAGGGTTTGTGGCCAGAAACATCCCCATGCGCTACT
CTTTCAACCAGAGGTCAAGAAGTCCTTTACTTTGTGTCTTTTTGTTGTTGTTGTTGAG
ACGGAGTTTCACTCTTGTTGCCAGGCTGGAGTGCAATGGCGCAATCTCGGCTTACCACA
ACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATCA
CAGGTGCCCAACCACGCTGCTAATTTTCATACCCGCGTACCTCGGCC

Sequence 678

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTCTGTGGTATTTCA
CATAATATTAACCAGCTGTTAGCAATGACTGATATATACTTCCATTGAAAATGATGTAA
GGTCTGAAAGGATTCATTTTGACAATTTTATATCACATATTTATATTTACCTTAGGTGGT
TCTTTTTAATGTTTTAATTTGGGACCACACTAATTTCTAAGTTGGTAACTCATCTCTTAC
CAAAATTAATACCAAGCCAAGAAAAATGGTTTCATGAATAGAATCTACTAGTCTTTTATA
TCTTATAATGGTAGATCACTGATGAGGTAGAACTCCATAAGAGCTTCNCTCTCACAGTNA
AAGGTTTTGGTTGTGCATGGATTACACCTGGTGAAAGTTGGTTAGTATTTGTCTAAGTGG
CTTAAGACAAATTTATTTTGATTTGTATTGTGAATGACTTTGCGAANCACCCAGAATTT
TNCCGCTTCGTGTGTNGTGTGTGTGTGTGT

Sequence 679

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCCACATAATAGCTC
AGTGCATGCAATTTACAAAGTAATAAGTGAAATGCTCCCCATAGTTGACTATAACATTTT
CTCATTTTTCTCTGAATTTGCTTTTTAAAAAAGTCTTCCCTTGCCATTCCCTTCCCCAT
TCCAGATTGTAAGTCTTCTTCCAGCTGCATCAGAAGAAGGGGACTTTCCATGTAGGTG
TTATTCTCAGAAAAGGCCAGAAAAGACCAGGTGATGGTGGGGATGATTGCTCCAAGCAT
AAAAGAGAATTGTGATGGTTCAGGAAGACTGGAAAATAACGAGACTGGAAAGAAATGAGA
AGGGCTTCAGAGGAATGGCACATTGAAATAAAAGGGAAGTGGTAAGAACAGGAACCCAAAG
NGGAATGAANGGGCNCACAGTGGCAGGGATGATTGGATAGACTGTGGAATAAAAAATAATT
TG

Sequence 680

AGGTACAAACTGGCTTCTTCTCTTTGTACCAGCACCTGCTTCATAGTCTCTCTGGAGTG
CCAGGAACGGGTCAATTTAGATTAAATCTCCCATACCGTTCCCTGGATAAATACCTCCTTCC
TGCGAGCCCGCAGGGCCTCGATGACAAGGTCTCTGGCCTCCAGCTCCCCTTCCATCACGC
TGAGGAGCATCCGAGCTCGGATTTACTGAGAGTATCCACATCAAACCTCTTTTTTCAGTT
TTACAAGTGGAATTAAGCAGTCCTCCTCCCCGTTTCTCCTTCCATTGCCAGGCTCAGCT
CCTCTACCCCAAGTACCTGCCCCG

Sequence 681

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGGTGGAAAGTGAGGTGGTTT
TATTTCTAGTTCACCATTTGCTTAGGCTGTATAGACCTCTGGAATCCCAGCTTATGTGG
AGAAGGTATCCTGTTAGACTTCCCTCCTTTGGTCAGCACTGGGCCTTAACTTCTGGCCCC
TCAAAGCTGCTAAACTGAAGGCCAGGCTTGCCTGGCTTGGCAAAGGACGTCGGGCAGAA
GCAGCTTCTCCTCTCCTCTTGTCTCTGTTTCCCCTCACCATAGGCTTTGGCCTGGGAG
TTTTCTACA

Sequence 682

CCGCCCCGGGCAGGTACCTTCTTGGTTGCTGTGACTGTCTGCTAGCACTAAGACTGTCTTA
AGCAGATAGAGGGCAATGGTCTTTGAAGGCAAATGACAAAGCGTGGCCCTGAGCTCCCTG
ACTGAGTTCATTTGGACTCTCAAGGGATGCCCTGGAGCTAGACTCGATCTGAGTGGTTGG
ACTAACTCCTCTTTGTTTTGTATTGAAGAGCCAGCTTACCCCGCCATTTNTAAACCTCA
GGCCAGGAAAACCAAAAAACAAAAAACCCAAACAAAAACAAACCCACCTTCT

TABLE 1
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TNAGAANTNAGTAANCTTAAGGCTTNAAGAATCAACAGNGCCCCTTTGGGNATTAAGGGC
CATT

Sequence 683

CCGCGGTGGCGGCCCCGAGGTACTATAAAATACTATCCTAACTTTTTATGTGTTTTTTTAA
CTTGTTTTTTAGAAGTTTTGTAGCGGTTTTTAAAAATGATGTATTTATAACTGGTTAGGA
TGCTAATATCTGTATCTTTTACTCTATAACCTAATTTTTACATTTTCAGAAAAAAATTTT
TACAACAATGTAAAAAATACATGGCCCGGGTGCGGTGGCTCACGCCTGTAATCCCAGCAC
TTTGGGAGGCCGAGGCGGGTGGATCACCTGAGGTAAAGGAGTTAGAGACCAGCCTGGCCAA
CATGGTGAAACCCCGTCTCTACTAAAAGTATAAAAATTAGCTGGGCATGGTGGCAGGCGC
CTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAAA
GGTTGCAGTGAGCCCAAGATCCGCGCCATTGCACTTCTAGCCAGGGAGAGAAGAGCCGAG
ACTTCATCTTAAAAAATAAAAAAAAAAAGGTC

Sequence 684

CGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACACTCTGGCCCTGGCTTTATTT
TTAGATTTTCTTTCCCGGTTGATATCGGAAGGCACAGAGGCAGGAGGTGGGGTGGATAG
TAATGTGTGCCCCCTTGGGGGTNANAGTGAGGTGGAGGGGGATGTTAATNACCATGAGAG
GCAGAGGGTCAGNCNANTTTCCANNGCTTCNNGCTTCCTTTAAATGANGGAAAACACGTG
CANGTNTTAGGAGACAAAGGAAGGGAANTGACTGTTTCCTGGCCTGGTNTGTGGGCCAG
TNGNCTGNTNCNTTCAGTGNTNCGTGCANTTNGACTNTACACNTANGNNGGCAGGCATA
GGTGTNCGGTTNTGAAAGACNNGNNNTCTTNCACATTCTCTNCTGCTCTAGGGACTGAC

Sequence 685

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTAGTAGAACTCTA
GGAAGTGAACAAACCTTTTAAACAACAGGGGAGTGCTTGATGAAGGAAGAGGCTACCGA
TCTTTCATAAGTATGAATAAGCAGCATGCATAAACCATTACCTTCCCCTATTCTCACA
ACCACCACCACACCCACCACTCTTGTTGGCAGTGGGGATAGCAGCCCATGTTCTGTG
AGTTGCTAACCGGTGCCAGGAGGGACAGTAGGGATCATGTCTTCAAATTTAGGGTTGT
ACCT

Sequence 686

CCGCGGTGGCATGCATCAAGGTGACAGGTGACGGCATGGTTATGGATTAACACCAAGG
AAATGAGTGTGGAAAGAAGAATGCANAAATCTGAGGACTAGAGCCTGGAGATGGGGAGCT
TCGAGCTCAGAGGAAGAAGGATCTTCATCACGGGGAGACATCAGCCTTCTGAGTATCT
GGGACTGCAGGTTATGTGCCACCACACTCGGCTAATTAATAAAAAATTTCTTAGAGACAG
GGTCTCTCTACGTTGCCAGGCTGGTCTCAAACCTCCTGGGCTCAAGTGATCCTCCTGCCT
CAGCCTTCCAATGCCTTGGGCTT

Sequence 687

ATGCATCAAGGTGACAGGTGACGGCATGGTTATGGATTAACACCAAGGAAATGAGTGT
GGAAAGAAGAATGCAAAANTCTGAGGACTAGAGCCTGGAGATGGGGAGCTTCGAGCTCAG
AGGAAGAAGAGGATCTTCATCACGGGGAGACATCAGCCCTTCTGAGTATCTGGGACTGCA
GGTTATGTGCCACCACACTCGGCTAATNAAAAAATTTCTTAGAGACCAGGGTCTCTC
TACCGTTGCCAGGCTGGTCTCAAACCTCCCTGGGGCTTCAAAGTGAATCCCTCCCTNGCC
CTCAGCCCTTCCAAATGCCCTTGGGGGCTTACAGGCCATTGGAGCCCCACCATGTGCAAA
NGAAAAGAAANAGCAATTTTTGGACATCCTGCCCAAAACAAACAAAGTTTGGGCAATGGG
TCCTGGTCAAGCAAAAACAAGTGGGGTTTGGNGGAATAAACCAACCCTTGGGTAAAAAT
AA

Sequence 688

NGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGGGCCATTGAGACTGCCATGGAAGACT
TGAAAGGTACAGTAGCTGANACTTCTGGAGAGACCATTCAAGGCTTCTGGCTCTTGACAA
AGATAGACCACTGGAACAATGAGAAGGAGAGAATTCTACTGGTCACAGACAAGACTCTCT
TGATCTGCAAATACGACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTCTCTGA
GCGCTGTCTATCGCATCTGCCTGGGCAAGTTCACCTCCCTGG

Sequence 689

TABLE 1
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CCGCGGTGGCGGCCGCCGCGGCAGGTACGCGGGGGGATACTCATTAGAGTTGCTCGGTGG
AGATGGAATGATGGTGGGGTGCAGTTAAACATGGCTGAGTGCTTTCTGCTTAAGGACCTG
ATGTATTAATGCTCTCCAGGTCATTCATATTTGGGGGAAGGAACAAAGAGGGTACCT

Sequence 690

CCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAAGTCTGCTATGAATCTCACA
GATGTAATAATGAGTTAAAGAAGCTAGGCACAAAAGAATATTACTGTATGATTCCAATCA
TATAAAGTTCAAACCAGATCAAATAATCAATGAACGAGGAGTCAGGATTCTGGTTATAT
TCAGGGATAGTGATGGAAGAGGGCTATAAGGAGGGTGTCTGGGTGCAGGTCATGTTCTAG
ATCTTGATCTGAGTGGGGGTTACATAGGTGTATTCACTTCATGAGAATTCAGAGGGCTGC
ACACTAATGATCTGTATAATGCTCCTCTATAGTATGTCACACTTCAAAAAAGTTTACAGA
AACAGTTCCTTCCTAATTTTACAGGGCCTAAGAGCTAAAAACGCAGCCCCAG

Sequence 691

NCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGGCCATTGAGACTGCCATGG
AAGACTTGAAAGGTGCGTAGCTGAGACTTCAGGAGAGACCATTCAAGGCTTCTGGCTCT
TGACAAAGATAGACCACTGGAACAATGAGAAGGAGAGAATTCTACTGGTCACAGACAAGA
CTCTCTTGATCTGCAAATACGACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTC
CTCTGAGCGCTGTCTATCGCATCTGCCTGGGCAAGTTCACCTTCCCTGGGATGTCCCTGG
ACAAGAGACAAGGAGAAGGCCCTTAGGATCTACTGGGGGAGTCCGGAGGAGCAGTCTCTTC
TGTCCTCGCTGGAACCCATGGTCCACTGAAAGTTCCTTATGCTACTTTCACTGAGCATCCT
ATGAAATACACCAAGTGAGAAATTCCTTGAATTTGCAAGGT

Sequence 692

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCAGGCACTTTTTTTTTTTTTTTTTT
TTTTTTTNCATANAGATGGGGCTTTGCCATGTTGCCAGGCTGGTCTCAAACCTTNTGAG
CTCGAGCAATCTGCCACCTCGGCCTCCCAAGNGCTGGGATTACAAGCATGACCTGCCG
NGCTGGCTAAAGTTTCTTATTTATACTTACTCATTCTCTAATATCTGGATTTCCCTAGT
CATCTGTCACTTCTCCCTGCATATTTCTGTGATGTCTTTAGGTCCCTCCCACTNTTGT
GTAGCACTCCCTGGGGACCAATTTGGAAGGATGCTGAGTCATATGGTTTTGGTTTTGAG
AGGGTTGAAAATGGAGACTCAACTCAATTTAGGAGCTATCCATCATAACTAGTAGCAAA
ACACGTCACTACTTGAGTCTCAACAAAAGACAAAAAAGGTTTNAAGTTGGGGAACAAAT
AGCTGCCAAGGGTTNTNTNTGACAAAAACATTGNGTTGGGGATTTAAATCNATGT
GAATCCTTAATCCCTAACTCATCCATGTTGGGGTTTTTT

Sequence 693

CCNCGAATTGGAGCTCCCCGCGGTGGCGGCCCGGGCANGGTACCTGCTTNCAGAAGTGT
TATCATGATTAATGACAGACCAGTGGCAGTAGCATCTCCTGAGGGAGGGTTAGAAATGC
ATATTCTCAGGCACCACTGCAGTCTTGCTGAATCTGAAGCTTTGGGGATGGGACCCGGTA
GTCTTTTTGGATAACTCTGCCAAGNGGTTCCAATGTGCTCAAGTTTGAGAGTTGCTGAAT
TAAAGCGCTGGGTCTTGCCAGGCATACCTGTAATTCAGCTCTTTGGGAGGCTGAGGTGG
AAGGATTGCTTGAGCCCAGGAGTTCGAGACCAGCCTGGGTAACATAGCAAGATCCTATCT
CTACCAAAAAAAAAAAAAAAAAAGTACCT

Sequence 694

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCGGGCAGGTAAGTCTCTGTCTTTAC
AGCTGAAGCATCAGAGGATGGAGTGACCAGGCTGGTCCAATGACAGTTATACGGCCATG
GGGAGTANACATGGAGTCTAATTCAGTGCTTGAGGCTAAGAATGAAGTTGTATGCATTGT
GGAAATTGTTCCAGGAGATCTTGCAACTTTCAAGTTTGAAGTCATGTCTGTGACAGTCCA
GGAATNTGATGCAGCTGTGGAAGACCAGGTGGAAGGGTGTCTGTAGAAGTTGTGCGCCT
CTCTGTGGCCGGGGTGTCTGTCATGGTACCT

Sequence 695

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCGGGCAGGTACACATGTATCANG
GAAAAGAAAACGTTATTTGTCCACAGATGCTGCTAGGAGCAGCTACCCCAAGACAGGCC
TTGCACCTTGGGTGATGACAATGCGTGGCTACTGAGAGCTGTTGACAGAGTGGACAGGGC
CCAGACCAGGACAGTCTCTAGAGGTCTTACCTCCTCAACCGTAACTTAATCAGCCCC

TABLE 1
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ATGCCGGGCTAGCCCCATGCCACAAAGGCTCAGAAATGCCCTGCAACATGTGGGACACCT
GGTAGTATCTACATAGGGGCCAGCATCCATCCCAGCTGCTGGGGGTGGCTCAAGAGCTGT
GAGGGACACCCTTTCCTGCCTGATACCGTGGACCAGTTTGCAAAGAGCTGACTGTCCTGC
TAGGCCCA

Sequence 696

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGCGGGCAGGTACTTTTTTTTTTTTTT
TTTTGTATATTTAGTAGAGATGGGGTTTTACCATGTTGGTCAGTCTGGTCTCGAACGGN
TGACCTCAAGTGATCCGCCCACCTTGCCCTCCCAAAGNGCTAGGATTACAGGCATCAGCC
ACTGTGCCAGCCAGCCCTATGCTTTTAAGAGTTCGATGGTTGAAAGAGACTGAGCGGGG
AAGGTAGAGCGGGGAGGGGAGGGACTACTTGGAGTCAAGTCAAAGTTTTAGGGAAAGAC
CTGAATCTGAAAAAGATTATTTAACCTTTATGTGTCTGAAATACTATATTGTGCGAATTG
TACCT

Sequence 697

CCGCGGTGGCGGCCGCCGCGGCAGGTACACAAACACGACAGAAGCCCACGGAGCAAGCCC
TGTGCTGGCCCCCTTCACATGACTTTAGGCCCTCTAGCAAGGTGATGTTTATTACAGGGT
TGCATAAACAAGGCCTCACCATTCAAAAAACCTTGATTCTATTACATGTTTCACATTAA
CAAAGACTGGAAATTCNTAGGAAAGGGATCTTTTTTATCTACATGAAAAGCACAGGCTA
GTAAAGACTTGTTGAAAAAGTTGAAAGAACATAAATGTATATGGTATATGCCACATAGCA
TAATGGAGGAAGATAGCAAATAGGAAACATATTGGTGAGGAAGACTGGAGTTTGATGATC
TAGTCAGGAAAAACATCAAGTTAAATCCTTTACTTTACACCTAAACCATAAACTGGTGAAT
AAAACAAGTATGTGAAAGCACANANGAGAGAGGACAGGCCGGGCGCAGTGGCTCACGCC
TGTAATCCTACACTTTGGGAG

Sequence 698

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATCCTATGCAGNCATNC
TGTNAGNACCCATTCCATTNTNCTATCCCTGGNTNGCTGGTGTCAATACTNTNAAGCGAN
TTACTCGNCGNGCTCTNNTTTTTCCCTCANAGATACCNNGTTGATTTCTTTGATTCTCTC
CATCTCTACAGGCATAATAACTCCTAATATTTAAAAACNCTGTAGAGGGATGNANNGAAG
CTGNNGNGAGAGCCNTGGGCTTTTNCNNTGGGTNAAGATGCACATTCTGAAAATNTG
GGCCTTGGCTTAAGCTGNACTAGNGCCGGCCACTCAGCTGATCTCACTAGCGTCACCTGT
CGCAATGGTGCTGAAGCGCACTNCCNAGAGGCCATAAGGCAAAGCGAGAGTNCNTGGCTA
TNGACTGGANCCCATTTAAGCAAAAAACATGCCTCNCGNANGACAAATTCNATCAACAA
AGGGNNGGCAATACAGGATCTGTACCTGCCCGGGCGGNNCGGGCANGAACCTTTTTTTTT
TTTT

Sequence 699

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCAGCCCGCCACCCGGCTT
GTGTGTCATCCTGGGCCAGGCAGGTGATGATGCCAAACACAAGGCCAGCTATGTAACC
AAGTAAAAACTTTCATCAGAATGCCATCTTTGTGACCCACAGCCATTGTCAAGAGCCT
TCCCTGTGCCAGGAGTTCAGCAGGTTACCTCCGCTCCACTAGTCACTAAGACACGGAT
ATTTTAAGAATTTAAAGCCTCCACAAGCCAGGCACAATGGCTTACACCTATAATCCACA
ACTTTGGGAGGCCAAGGTGGGAGGATCACTTGAGCCAACGAGTTCGAGACCAGCCTGGGC
AACATAGCGAGACCTTGTCTCTACAAAAAATTTAAAAGTTAGCCAAGCATGGTGGGGCA
TGTCTATAGTCCTAACTACTTGGG

Sequence 700

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTCAGTAGAGGCCAGGTTTCACC
ACGCTGGCCAGGCTGGTCTGATCCCCCGGCCCCAGGTGATCCGTCCACCTCAGCCTCCC
AAAGTGCTGGGATTACAGGCGTGAGCCACCGCACCCGGCTCTTTTTTTTTTTTTTAAAA
TCATGATTTTAACAGAAGCCTCCATTCAAGGCGAGACATGCCTTTTATTTCTTAATTGC
GAGACACTTTTCTGAATCCTCTTGTCAGTTGCACCTTTTAATACAATTGAGGTGACACTG
TTCTTCATGGTGACACTGGTCTTTCCCAAGAGGTTTCAGCTAATTCAGTCTATCAGATTT
TACATCAGATTTTAAATTTGCTTCAAACCTTGGGTGCTTGATTCAAATTCATGCTTCAT
AGAAAAATGCATATCAAGTTCACAGTTGACTAACTGCAGCCACGTTACAGTACCTGCC

TABLE 1
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CGGCGGCCGCTCTAGAACTA

Sequence 701

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGAAAAGGCTGATACACAC
TGACAGATTTTGTAAACAAGGGACATTTAAAACTGAGCTGGTAATAGACTTGATTTCTGGT
GTTGCCACTCAATAGGCATGACTAAATAGTGACCTCACTGTTCTACTTTTTATAATTAA
AATTTTAGAGGAAGCTGAGTTCCTGTATTTAACTACAAGTTAGAGACTCAGCCCACAAGC
TTTTTTTTTTTTTTTTAATATGGTTTCTTTTTTTTTTTTGGAGACGGAGCCTTGCTNTG
TCACCCAGGCTGGAGTGTAGTGGCGCGTCTNTGCTCACTGCAATCTCTGCCTTCCCGGTC
CAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACCGGCGTGCACCACCACG
CCCAACTAATTTAGTATTTTAGTAGAGACGGGGTTTCCCATGTTGGTCAGGCTGGTC
TTGAACCTCTGACCTTGTGAACCTGCCACCTTGGCCTCCCAAAAACGCTGGGGTTACAGG
CGTGAGCAACCATGCCAGCCTTTTTTTTTTTTTTATT

Sequence 702

AGGTACGCGGGATATATNTAAATTTAAGAAANCATCCCCGGTAATATGGCTCTTCATAAT
TCTAAGACTAAGGCTGGNGTAGAAACCTAACCACCTACCTTACAAGNGAAGGGGGCTATA
CCATGGGGTAAGCCAAGTTTGAAATTTATGGGAATCNTACCCAACCTTGGNTTAAGGGGG
CCCTNGGATTTGGCCTNGGGGGCCAAGNNTTTCTGTATTTTTATAAAAGGTGATCTTN
CATNGGTATTCCCTTGGTTTACCTTGGATAAGGGGGGATTACCAATGCCTTCTTAAGGAA
AAAAATTCACCTATTTGGGCCTTGGGGGGAAGGTAGGGTNGGGCTTCAATAGCCCTTGG
TAAATTCCTCCAAGCCACTTTNGGGGAAGGAAGGGCCTGGANNGTTTTGCCGCCCACTT
ACCACTTCCCAAGCCCTTGGGGGGTGGAAACCAAGAAGTGGGAAGGAACCTCTTGGCCCT
CAATATNNAAAAAATNAGAAAGGNAANATTNCACCTATTCTTACCANAACCCCTAAG
NACCTAATTTTTAAAAAATACCAAAAAGAATTGGCCCTNGTTTTNTCAAAAACCACCTAA
TTTGGGAAATAAANAANGGGGTGGAAGAATTATTTCTTTAACCNNATNGGAATAAAA
ATNNATNNNATNGGGGNTCCCTTGGCCCCNGGGCCGGGCCGCTTCTAAAAACNTAAGN
GGGGATCC

Sequence 703

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGNCGGGGCAGGTACTACTGACTTACCTGCC
ATGGGCTTTCTCAAGACAAGTCTCGCAGGAGAGGCACACTCACTTCTAGCGTCAACTATT
GAACCAGCCACTGCCTTCACTCCTCATCTCTCAGCAGCAGTGGTCACTGGATCCAGTGCT
ACATCAGAAGCCAGTCTTCTCACTACGAGTGAAAGCAAAGCCATTCACTTCTNACCACAG
ACCCCAACTACACCCACCTCTGGAGCAAACCTGGGAACTTCAGCTACTCCTGAGAGCCTT
TTGGTAGTCACTGAGACTTCAGACACAACACTTACCTNAAAGATTTTGGTCACAGATACC
ATCTTGTTCCTCAACTGTGTCCACNCCACCTTCTAAATTTCCAAGTACCT

Sequence 704

CCGCGGTGGCGGCCGAGGTACTGTGAAAGAACTAGCACTTTGAGCAGAGAACAAATGCCT
TACTTGAGTTTCCCCTGGACTCTATCCCTATTCAAAGATGCTTGGTTATACCTCAAGAGG
GAAGCAATCCAGACCAACTCCTATGACATGACAGGCACTCAAGCCTGATGAGGCAGAAAC
CTGGCAGCTGTAGATGTTGGAAAGGATAATTTATGTGTTCAAGTGAAGTACTAGGATTCTAAGG
GCTAGATGCTAGCTTCAAGCACGGCTGGATCTAGGAAGCCCTTTTGGTCTCCCTTTTCT
TGGTCTACTTTTCTCTGTAGGCAAGTTCATTCTTAGGCAAGTCTCTGCATGTGGC
AGCAATGATGGACACTGGAATCTCTGGGTATTGAGAGTCTTTCAGTAGCAG

Sequence 705

CGGGCGGGTACCTTACCACCCCATCCCCAGAGCATTGCATGGGGTGTGGGCACACAGTA
GGTGCTCAATGTAAACGTGTGCACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGC
CCGTTCTCTGCACCCCTCCCTCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGA
GGGGCTGGGGCGCTGGTCTGATTGTGTGGGTGATTTGGGGAGATCTTCTCTCTCCGGA
ACCCCAAANGGTTGGGACAAACACAGCAACAAGCCCAGCTCCCTGAATTTCAAGTATTCA
TTTGTGGGATAAAGGAGTGAATGATAAAGTGAAGGACGACTGTCCCCGCGTACCT

Sequence 706

NGGTTAANTGCCGCCNCTTGGCCGTAATCATTGGGNCATTAAGCCTGGTTTTCCCTNGTG

TABLE 1

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TGAAAAAATTTGTTATCCCGCTCCACAATTCNCACACCAAACATTACCGAAACCCGGGA
AGNCAATAAAAAANTGGTAAAAAGCCCTTGGGGGGGTGGCCCTTAAATGAAGGTGGAAGC
CTAAACCTCAACAATTTAAATNTTGGCGGTTGCGGCTCAACTTGGCCCCCGCCTTTTTNC
CAAGANGCGGGGGAAAAA

Sequence 707

GGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGAACATCCATGGCAGACGCTATT
CTTCCCTCTTAGAGATGCAGACACTGAGGCTCAGAGAAGTTGTCCCGCACCCAGTATGT
GATGGAGAGGTAGAGGGTAAAAACATCAACTGAAGGATTTAGCATTGGGGAAGAAGGAA
GAAGCCCCAAATGGAGTAGATCAAAGGCTCCCCGTGAACAAATTTAAATTAAGGAGAA
AGAAGCAGAATTCAGTCTTCTCCACACCCATAACCAAACAGCTCCTATGAAGGCACCAAG
CCTGACGCTCATCCCAATAAAAAGGAACGATCTGGAGAGAGGGGCAGCCGCTGGTGACAA
GAGAACCCCCCAGGCAGCCTCGTCATCTGGCCAG

Sequence 708

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTGGGGGACAGATATCATAT
AGGGGATTTCATGTCAGTGACCAAACGAAGTGACCATTACAGCCCTTTNGAAACCTGAGGT
GTAATTTTTAAAAATGAACTCATGACTTTAATAGTCATAGACTCAAACCTGAGTTGATTA
TTATGAATTAGTTTATGGGAGTCTCAATATGTGAATATGATGGAGACAAGTTTTGGAATA
CAGATAAATCAAGTCACTGTATTCACCTCTCTCTCTCTCTTTGAATAGCCTTATCTTTG
CCTATACACACAAACAGTGCAGCCATCAAAATTTTCAATTTACAAAATGTTACAGTCAT
GCTTCTTCTTGACTAAACACTGGGGTTGCTGCCAGTGGTAATTGGCTTGAACACAGCTA
ATTTTATATATCTATTTAGTCTGGATATTCTAGATGAGTGGGCACTATAGT

Sequence 709

ATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTACCCACGTTTTGCTCCCACTCCTT
GACCGCAGGGGCTCGGACACAAACCCCTGTCAACCAGGAGAGTCAGTCAGCACTACTTGGG
AGGGCTAAAGGGAAATTTGGAAATAAAATTCCAAAGTTTGGAGTAAAAAAATTCAAGTGT
TGATTTTATATTCTTTCCCTTTCTGACACAGCCTAAAGCGTAGGGGGAACATGTGTTTAT
CTGTGGGAGATAAACAAGATGGAGTCCCAAAGACTTTAACAAAATATTTTTTTAAAAATC
CACTAGAATAGAAAATACATTATTTAGATATACTTTATGCTGAGAGTGAGTATATATGCT
TGTCCTATTTAACTTGTGAGAAAAAGTGGTATCCCTTGATACATTTAGAAATATGGGGG
CTATCTTGGTTCAATTGNGGGGGGTGGGGGCAGAAGGAGAATAAATGCAGGATGCCCTTGT
TGAAAGGAATCTTAGCATGGCCACAGGGGACGTTTCCAGTCGATTACCAAGGAATGCCA
GCCT

Sequence 710

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTACCCACGTTTTGCTCC
ACACTCCTTGACCGCAGGGGCTCGGACACAAACCCCTGTCAACCAGGAGAGTCAGTCAGCA
CTACTTGGGAGGGCTAAAGGGAAATTTGGAAATAAAATTCCAAAGTTTGGAGTAAAAAAA
TTCAAGTGTTGATTTTATATTCTTTCCCTTTCTGACACAGCCTAAAGCGTAGGGGGAACA
TGTGTTTATCTGTGGGAGATAAACAAGATGGAGTCCCAAAGACTTTAACAAAATATTTTT
TTAAAAATCCACTAGAAATAGAAAATACATTATTTAGATATACTTTATGCTGAGAGTGAGT
ATATATGCTTGTCTATTTAACTTGTGAGAAAAAGTGGTATCCCTTGATACATTTAGAA
ATATGGGGGCTATCTTGTTTCATTGTGGGGGTGGGGCAGAAGG

Sequence 711

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGACGGTGAGCCGGAG
GAGTCATGTCAGAGGGGCGAGCAGGAGCGATTCCGTCGCCAAACAGGTTATGAGTGCCAG
TGAGCCGCCTTAGATAGAAGCATCGTCAGCACTTTATTAATGATGGATAGNGAGAATAAA
CCCGAAAATGACGAGGATGAAAAGATAAACAAAGAAGCACAAAGACTTGACAAAGCTTTCA
TCCATAATGAAGACGGTGGGCCTGTATCTGATGTGATAGCAAGTTTCCCTGAGAATTCT
ATGGGCAAAAGAGGTTTTTCAGAATCATCGAACTCTGATAGTGTTGTTATAGGAGAAGA

Sequence 712

NCCCGCNGTGGCGGCCGAGGTACTCTTATGAGAGGAACATTAAAAATTTGCAATTATAATG
CAAAGAAACAGGAGACGATCGTGAGAATAAGCAATGTCACACACATTTCTCTCCAAACTA

TABLE 1

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TATGTATCTTGTCCCTTTAAATTCCTTGACGTGTGTGTGGGGCCTGGGTGGGGGGTGTGGG
TGTGTGGTGTCTAAGGGCCTTTCTACTAATCCAATAACTGGGTATCTGTGAGGCTG
CTTATTCTCACTGTATTTTACTGCTTCTTGCCTTCTTGTTTTTTTTTAACCATACT
CAGGTATGGTTAAAATGTAAATGAAAGAA

Sequence 713

CCGCGGTGGCGGCCGCGCCGAGCAGGTACTGGGGCTGCACAGGCTGTGGCAACACTGGCTA
GTCAAAGCCTGGAAAGACCTGTGAGCTTGAACCTCTCTGGGTGCCATTGTTCTGTTGGT
TTCAGCAGTGAGACTGAGAGAGCCTGTTCTGTTTAGAAAAGCCACAGTGGTTTTCTAGGT
AAAGTCTGCAGGAGATGTCACTTGGTGCCTTTTCAATACGAGTTTTCCACCTGCATTTTT
GGAACCATTATGGGCCTTTTAAAAATTTATTAATAAGTCTCTTAAATATTTTATAATCTA
GCTTCTGAGACAAGATGATTTTAAACAGTTATATGCTCTAAATTAATAATTTA

Sequence 714

AGGTACCGTGTGAGCAGGTGGCGTTCACCAGGGGTGAGACTTTATTGACAGTAAGTTGCC
TCTGCCAAAAAACGCCCTCATATGTCTGCTGATGTTGAATTNCNNCCNNATGGCAGGAG
GTTTTTGGTCCCTCCCAGNTTTAAAAAAAATTGGTTAAAAATAACCTGGGTTTGGTTN
TTTCTTTTGNATATGGGGAAGGCCCTTCCAAGNAAGNGGAAAATAAANAAAAAAGTAATTA
NANCCTTAACCTTCCCTAAGGGGGAATTAATTGGTAATTTCAAATTTTTTGAATGGCC
TTANCTTTNTTAATTTTTTTAAATTTTTTAAATTTTGGGANGGAAACCAAGGGGGGGG
TTTCTTNTGGGCCTTTCTTGGTTTGGCCCCCAGGGGGCNTGGGGNANGGTTGGCCAAGG
NCCAATNTTNNGCCAAAATTTCAAACCAAGGGCCCTTTCNAACCTTTGGGCCAAGNTC
CCCCTTTCAAAACCCCCTTTCNNCCTTGNTTGGGCCCCCCCAAA

Sequence 715

CCGCGGTGGCGGCCGAGGTACCGTTTTATGATGATAACATAACTTTAATGCTCCAACCTG
AGAAAGATAAAATAGACTAAGATGACCATTGAATGCAAACAGAAAGTTCTAAATGAACAA
TCAAGNCAGGACCTGGAAATTTCAAGTCCCTGGTGGTTGGAAAANTAAATTAATTAATA
ACCAANTTTCTTGGTTTTTCCAAGGAAAAANTGGNTAAAAAAAATTAAGGTNTTTAAAT
AANCCCCAGGGAAAAATTTCAAATTCAAAATTATTAATAAGGCCTTAAATTAATTAAT
ATTTTTTGGCATTTTCAAGGCCCAACCTTAAATTTGGCCTTANCCAAAATNGGTTTTT
GGGTAATTAACCAAGGGCCAAATTTNATTAATAAAATTC

Sequence 716

AGGTACACGATTATTTACCATCCAGGTATTAAGCCTAGCACCCAAGAGTTTTTTTTTG
CTTCTCTCCTTCCCTCCCTCAAGTAAATCCCAGTGTCTGTTGCCNCCNTNCTT
CGGTANNAACCAAGGTGGTTTTTTTTTAAATTTTTCCACCAAAAAAATCTTCNCATNC
AACCTTCCTTCTTTTCAATTTTTTGGCCTTNNCCTTAAAACCGNAACCTGGAAAAACCT
TNCTGGGTTNTGGCTTCCCCAGTAAAGNACCAAAGGAAANTTTTAAANTTTCAATTTT
TTTAATTCCCCGGGTTTTTTAAAAAAGGGTTNAAAAGGGAAAGGNTTTCCTTAACCCCCA
AGTGCCCAAGGGGAAAGNTTGGGGTTGGGGGGCCTTCCAACCNAATTNCCCTAANTTAAA
AATTTTTGCCCNAAAGGGCCAAACCTTTNNTTTGGGAAGNGAAAGGGGGGGCCCCCGGA
AAGGGGGCCCCGNAAGGGTTTGGGGGAAANTTCCAACCNAATTTGNTAAAGGGGGTTTT
TGGGGGGAAAAAG

Sequence 717

CCGCGGTGGCGGCCGAGGTACTACAATAAGGACAAATATTCAAAACATTCTGTAAAGTAA
AATAAGACAGTCAAAAAGGAAAGCTGTATAATTACACTCATGTAAAAATATTTAGTCCAA
CNCTCACAGGANAACCAAAGGTGGTCAATAGGTTCTCAAGCCAGGTGGCCACCCCAAG
GAATGGTTAAACCAAGGTTCTTCTTCNGTTAAGGTTCTGGAAGGAATTAACCAATT
CCCCAAGGAGGTTTNTTTTTGGTTTTTCTAACCCTTCTTAAAGGGGAGGAATTTTAAAG
GGGAGGTGGTTAAAAANCAACCAAAAAAGGGTTTGNAAAGGGNTTTTGGGGGAAGGNTTT
GGGAAAAAANGNTTTTTAAAGGNA

Sequence 718

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGACTGTCTCAAATTCCT
GGATAGCTGTCCCTCATGTACCTAGCTGCTGAGAGCTTTGTGATCCTAACAGGTGATGA

TABLE 1

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CTCAGACCGACACTGCATTGGTAGGAATTCCACAAATAGGTGCCTCAATGTGCCTAGATT
GAAATATCAGCCTTTCCAGACTGACCTGATGGGTTGACTTCAGGTGTGGTGTAACACC
TACATTTTAATGTAAACATTTAGTGTAAATCAATGAGAACTATCATTCTGCTTTAATCAC
CATGAGTTCTGAAATAACAAAGGATTTGTCTGACATTCATTCTAAGAAATTCATTCTTAC
CTGACTAAGAACTTTTTTAACCCGGCACAATAATAAGAAATGACCTGTNAGTACCTGC
CCGGGCGGCCGCTCTAGAAGTAG

Sequence 719

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAAGTGTCTCAAATTCCTTGG
ATAGCTGTCCCTCATGTACCTAGCTGCTGAGAGCTTTGTGATCCTAACAGNGATGACT
CAGACCGACNCTGCATTGGTAGGAATTCCACAAATAGGTGCCTCAATGTGCCTAGATTGA
AATATCAGCCTTTCCANACTGACCTGATGGGNTGACTTCAGGTGTGGNGTAAACACCTA
CATTTTAATGTAAACATTTAGNGNAATCAATGAGAACTATCATTCTGCTTTAATCACCA
TGAGTTCTGAAATAACAAANGATTTGTCTGACATTCATTCTAAGAAATTCATTCTTACCT
GACTAAGAACTTTTTTAACCCGGNACAATAAANAATGACCTGTAAGTACCTGCCCG

Sequence 720

CCGGGCGAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCTGTGCTCCAGGTGTTTACA
GCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTGCGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTG
GAGGGGCGAGTTCGGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCACGTGGTTAC
CTTGCAAGTGACAGCCTGTGGTCATAGA

Sequence 721

CCGGGCGAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCTGTGCTCCAGGTGTTTACA
GNTGCTTNGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTGCGCAAATGTTGCC
TGTGCCCAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAAAGTGAGCTCGCTG
GAGGGGCGAGTTCGGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTG
ACTGCATTACACCACTCAGTATATGTGAGGGAGGGGATGTGCCTCTGGCCACGTGGTTAC
CTTGCAAGTGACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAA
CATGTCTTGTCTCTCAATGGCCCTGGCAGGCCAACCTTTAGTTTCAGGGCTACCACCTG
TGCGGGGGCTTNTGTATTACCCCTGTGGATATTAATGCTGCACACTGNGGTTATGACT
GTACCTTCGGCCGTT

Sequence 722

GGAGAGGAAATGTGTAGGGGTGAGGGATGATACAAGAAAGCCAAATCCTCATCTTCTATA
GTAGAGAGTCAGCGGATAAAACCTAAAAACAATACATCAAGAAATACTTACACTTATGGA
AGGAAATACCAGAAGTTAAAAGGGGTACTTCTGGGACATCAGACACCAGACTGCAGGGA
AGGGCTGCCTCTTGATTAACAAGCTTCCAGTATAATTTGCTTTTTAAAAATAGGTCCAT
GCATTATTTAATAAAAATTANGCTGGGCGTGGTGGCTCAGGCCTGTAATCCCANCACTT
TGGGAG

Sequence 723

ATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTAAGCAAGCTGTGTGACCTA
GAGCACAGTGCTTTGAGTTTTTGTGCTTCTGCTGTCTATAAAATGGGGTTCACAC
AACTCACCTTACAGGGCTGTAAGATTAGATTACACAGAAAATATATTTTTGGCTGTGGG
GGCTGGAAGTGTTGCTGATTAGCATTTGAAATCCCATCCTGTGGGTGAGAAAACCCACC
TTATGACTTGGTGGGAAACAAAGCCAACCTCCCACTGATGAAGCTGAAAGTAGCAGAACC
TTGCTTCTACTGCCTCCCTTGACGCTAGAGGCAGGCACAGGACTAGCCTGTCAATTGGAT
GCAAATGCTCCAGGCCTTGAATCACAACCTGGTGAAGTGCACCCAAGTCTATTA

Sequence 724

GGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCTGAGACTTCTGGAGAG
ACCATTCAAGGCTTCTGGCTCTTGACAAAGATAGACCACTGGAACAATGAGAAGGAGAGA
ATTCTACTGGTCACAGACAAGACTCTCTTGATCTGCAAATACCGACTTNATCATGCTGAG

TABLE 1
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TTGTGTGCAGCTGCAGCGGATTCCCTCTGAGACGCTTGTCTATCGCATCTGCCNNGGCAAG
TNTCACCTTCCCTGGGATGTNCCCTTGGACAAGANACAAGGGAGGAANGGCCTTAANGAT
CCTANCTGGGGGGGA

Sequence 725

TAGGGNGAATTGGAGCTCCCCGCGGTGGCGGCGCCCGGGCCGGTACCCATAAAAAATTAAA
AACTATTTTAAAAAATAAATTCATTTGAGCCACTCCTTCAAACCACCCAGAGTGGGTAG
ACGTCTTTCGTGCCTCTAAGAAGCCCCATCTCTATTCTGCGTCTCACCTTGCAGGGCTGC
TCATCTGAATCCTGAAGATGGTGGACACCCATCTGCTAGGACTGAAATGAATAGGACAGA
GGGAGGTGCAGAGTGAATGGACCATACTACCTGTCTCTTGGCAACGTGTGATTGAATAA
AACAACCTCTTTAGAAGTTTGATAGAGTGATTTGATAATGTAATTTACAAGTGATCATTT
CTTTTA

Sequence 726

GGAGCTCCCCGCGGTGGCTTTTTGAGTCTGGACAGGNCCTCTGTTTTGCTTTAAAGTTAA
GAGAGCTAAATAAATGATGGTAAAAAGATAATAAAATAGAACATGAAGGGCTGTCAGTCA
GTGTAGGTATTTCCATCCCCTCACTTTTCAAGTGAGGTCACGGAGGCTCAGAGCGATAAG
GAGACTTGTCCAAGGCCACACACCGGCTGGTGTCTCAAGCCGGGACTTGAACCCACGCAGT
CTGACTCTAGAGCCCAAGCTCCTAACTATGACATCCTATTTGATACACTGTTTTACTGGA
GAAACAGATCATTTGACAGACATTCTTTCTGTTAGCAATTTGACAACCTCTTTCCCAGTT
GTCTGTACCTGCCCG

Sequence 727

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCGCCCGGGCAGGTACGCGGGCTA
TTCTCTTACAGCTAGGACCCAGCGTTCTGGGCAGAATAGCAGGCAGCGCAGTAGCTACTG
AGATTATAAGTGGTAGGTTTATGGAGCTGTGACCACAACTCTCCACAAGCCAGTGCTGTCT
TCATGCAAGCACTCTCAGTGTCCAAGTGCTGAGTGTGTGAGTGGTCTGGGCTTTGCAGGG
TCGGCCAAGCTCTTGGAGAGCAGGCTTTGTTAGCTGGGGAGTCATCGCTCCATGCAGGC
CCTGAGAATGGAGCATCCTGAGTGGACTGGTAGAGATGGGGCATGGGTCACTCTGAGGGT
TTGAGCTACTTCTGCTATTTTGAATTTCTGGTTTGAAGTGCAGGATCGTGCTGAGTTTG
GCACAGACTAATTTCTCTGTTGGCAGCACATGATGTATCAACTCATGTGTCAGTTGGTTT
G

Sequence 728

CCGGGCAGGTACTACCTTCTCTGCTACAAGTCGAGCGAGGAGCCCCGCATGAGCCCTGAC
ACCTGTGCCACCATTTTGGAAAAAGCTGGTCTCGATAACTGGGCTCTTGGAAAAACAAAA
GTGTTCCCTAAGTATTATCACGTGGAGCAGTTAAATCTAATGCGAAAGGAAGCTATTGAC
AAGCTTATTTTGATTCAAGCTTGTGTCAANAGCATTCTTGTGTTCAAGGAAGGATACCAA
AAAATACAGGGAGGAAAAAGGAAAGGAAAGCCGCTTATAATAATACCAGTCAGCTTGCAA
GGAGGGACCAACCTTGTGAGGGAAAAACAANAAGAAAAAGGAAAATTTGGTTTGGACATTG
AAAAACCCCAGCANTTAACCAACCCAATTTCAAAAACCTTTCTTGATTGAGGGAAATTTT
GACTTACCAAGAAAAAACCTTTGGNAAAAATACCCANGGGGGGNTCCTGGGNAAAGGGNA
GGANGGGAGCCCAAAAAANAATTTGGANAACCCCCCNANGACCGACCCCCCNGGAAACC
CCCA

Sequence 729

CCGCCCGGGCAGGTACTTTCTTTTTTTTTTTTTTTTTTTTTTACGGAGTCTTGCTCTGTC
ACCCAGGCTGGAGTGGAATGGTGTGATCTCGGCTCACTGTAACCTTCGCCTCCAGGTTT
ACGTGATTCTCCTGCCTCAGCCTCCGGAGTAGCTGGGATTACAGGTGCACACCACCATGC
CTGGCTAATTTTTGTATTTTGTAGAGACGGGGTTTCAACATGTTGGCCAGGCTGGTC
TTGAACTCCTGACCTCAAGTGATCTACCCACCTTGGCCTCCCAAAGTGCTGGGATTATAG
GCATGAGCCACCACGCCAGGCCCACTCTNTAAATTTTGACCACCTGCCTTGAGTGGTCT
TCTAGCACCTAACCTCTGTCTAACCTTCGAGAGCTTTGCACTAGCNATTCCTGGGGACC
AGCTATGGTTGGTATCTTCTCAACTTTCTAATTTTTTAAAAATATTATTATTATTATTA
TTATTTTAAAA

Sequence 730

TABLE 1

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TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTGTGTGGAA
AAGAATGCTTGCAAAGCTTGTCACCCTCACGAGAATTCCTCTGACAGACATTTGCCTTTG
ACAGTGAAAACAGATATTAAGTGAAAGGAGAAGAAACCGAAGAGCATCAGAGGGGACGA
CTGGGTTACTTAACTGTTGGGGAGCAATCTGAGGAGTTGGTTACCAGAGAACTGGCGAT
GGCGATCCCGTGAGCAACATCTCTCAGACCCATTTAAATGCCGGGGGATACTTAATCAT
GCTGAAAAACAGCAGAGCCCTGAGGTTTTGGACTACATGTTGCAGAAAGAA

Sequence 731

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACTACACCTGGGACAAA
TACTTTTTGTGAAGNCAGGTAAAGCCTTTGCGTGCAATATAGCATCTCTATGCAATGCA
NCAACTCCTCGTCTATCGCTACAGTAAGAAAACAGCCACGGGTCAGGTGTTGNGGCTCAC
ACCTGTAATCCCAGCACTTTGGGAGGTCNAGGTGGGTGGATCACTTGAGGCTAGGATTTT
GAGACCAGCCTGACCAACATGGAGAAACCCCATCTNTACTGAAAATACAAAATTCCCGGG
TGTGGTGGCNGCATGCCTGTAATCTCAGCTACTCGGGAGGCTGAGGCAAAAGAATTGCTT
GAATCTGGNAGGCGGNCGTTTGNNGGTGAGCCAAAATCGTGCCATTGCACTCCAGCCTG
GGCAACAAGAGCGAACTTTCGTTTCAAAAAA

Sequence 732

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACTAGTTATTT
TAAATTCCACTCATAACTTATCGGCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGT
GGAGCGGGAAAGTGCAATCCTACCTTGCTGGGGAAAGGTATAGAGATAGACCAGCACTAAT
GACTACCACACTTCGCTAAGGTCACATAATAAATAAGCATCAGACATCAGGTGTGGTGGC
TCATGTCTATAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGA
GTTGGAGATCAGCCCGGACAACATAGTGAAACACGTCTCTACTAAAAACACACGCAAAAA
AATACGAGGCATGGTGGTGCATGCCTGTAATCCCAGTTACCTGAGAGGCTGAGGCACGAG
AATCACCTTGAACCCAGGAGGCAGAGGTTTGCAGTGACCCGATATTATGTCACTGCAAG
TNCAGCCTGGGTGACAGAGCGAGACCTTGCTNAAAAAAAAAAAAAAAAAAGAAAA

Sequence 733

CGACCACTATAGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCACGGTACTGC
TGGTTCAAGCCATTAAATTACATCACAAAGGTTTGGTTTCTCTGTATATATTTCTCTGGG
GCACTTTTGCTANGTTGGCTCTATCCTGAGGCAGNCTCTCTCCTCGTGGNAACCAGGTGG
CTCTAGCAGCCTCAGCTTTATATCTCTCAAGAGTAAGTCCACCGTCACAGAGC

Sequence 734

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACACACCACCACA
CCTGGCTAATTAATTTAAAAAAATTTTTTTAGAGATGGGATATCTNTATGTTGCCAG
ACTGGTCTCAAACCTCTGGCCTCCAGCAATCCTCCACCTCACCTCCCAAAGCCCTGGGA
CTGCAAGCATGAGCCACCATGCCAGCTATATTTTCTGTAATTGCTAATGANAATGAAA
CATGTATGCTGTGGACAGAAGCCTTGTTGGACCTAGAGCCCATGCTGGGTCCCTTGCCTT
AATAAACATAACTCTGGCATTACATATAATAAACAGCCTCAAAGANCATGTTTCTTT
ATTAAACTCTGACTGTTTCAGCATTATTTT

Sequence 735

GCGAATTGGAGCTCCCCGCGGGGGCGGCCGCCCGGGCAGGTACTACTGTGTCCTTTAGAT
CACTCTGCCCTTGATCACTCTGTCCCGTCACTCTGCTATTTACCTGNCAGNGAAATACCT
GGTATCGTCCTGCCAACGTGAAGCATTGAATGCTTNATACGTCTCCATCCTGATTGTTA
GGCTTTGAATGCTGAGAAGTATCTGCACTTTGTTGGTCA

Sequence 736

CCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGAAGTACCCTTAAGCCCTGCTCCT
TTGTAAAGTCTTTTTGGATTGTCTATCATCAAGAGTCAGTNGATCTCCANCTTCTCAGAAC
TCACAGGGCACTCTGTCTAGGCATTGCTGACCGTCTGCAGTGTGAGATGGTGACTTCTGT
ATGTGTTGTGTTTCCCGTTAGACTCTAAGGTTTTTAAAGGCGAGACTCACTCCTGCAGAA
GCACATAACACAATGCCAACTCTTATTTACGGAGGTCCTGGCGCATTGTCAGCTTTTGG
TAAATGCTTTTCTTTGTTGAATACTTATCTTCTGTGTGCCAAGATTTGTGTTAAGTGCT
AGAAAAATGTGGGAGGTCACCGCAGACCCTGTTCTCATGGAAGTATGGTGTGTAGTGGG

TABLE 1

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GTGNGGATTAACATAAATAAAATGATGCGCAAATGAACACAAAATTCAAATTGATGATGT
GTACCTGCCC

Sequence 737

TNTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAATCCCTGAGCAGTCGAAG
TGGATGCCAGACCAATGGCCAGTGCTAATATCAATGCAANGATCCCAATGACGATGATT
GGAAAAAATTCAATGGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGT
GCAACAGGACTTATTTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGCT
TCAACAGCAGGCGGATCATTTTCCCCATGGTGACTATTTGAGGACCTCTGACATCCGGC
TCCGCTCCACCTCTACCTCATAATTCCCGAGTCCCAAAAATGTAGATGGCACCACGGAA
GAGATAGTAGGCCACAGTGTTACTGGCTTCCCATAAACACAGCCCTTCTGGCTCACAC
GGGGCATGACCTCCCGCGTACCT

Sequence 738

AGTCCCCGCGGTGGCGGCCGAGGTACATGTAGTTGGATGTCGAGGTTNGATTAGATTCT
GGGGTTGGTTTGCTTGTTTTGGTGGATNGTTTNTGAGTCGACTTTACAGAGGGTTGTTA
TCCACCAGAAGGCACATGTGCTTGCCTGTGTCTTTTTGTTATTGTTTGAGGCAGAGCC
TCNCTCTGTCTTCCAGGCTGGAATGTAGTGGCACAATCTTGGCTCACTGCAACCTCCACC
TCCAGGTTCAAGTGATTCTCCTGCCTCAGCTNCCAAGTAGCTGGGATTACAGGTGTGT
GCCACCATGCCAGCTAATTTTTGTATTTTCAGTANANATNGGGTTTTTGCC

Sequence 739

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACACTTCCACGA
GAAGAATTAATATTGTAGTGTTAGGAAAACTAGCAATTTAACTAAACAGCATCAAGTTAC
AAACCAGGAAAGTGATTTAACTAAATGCTGGCTTATCTTTCTGAAACAAAGCATCTAA
ATTTGACAGTCCAAAATGGCACTTATTGAGTGTCCGTGACAATACATGCTGACAAGCAGC
ACACCTCTTTTTGTTTTTTAAGACGGCATCTTGTGCTGTCACCCANGCTG

Sequence 740

CCGCGGTGGCGGCCGCGCGGGCAGGTACCTATATAAAAATTGATTTAGCTTCTACACTCA
AGTAATTATAAACAGGTTTNTCTTTGGGACATTTGACAGTTATGTGAAAGGTGAGTCTT
CGTTGTGTAGTATTGTCTGTTACACTGCAGGTGTCTAGAATTGCTGATAGTGTCTCCCT
CTAAAGTAATGTCACCCAACCACTTGTAATTGACGATAATAAGACAGGAAATCAAGAAC
CAATATAAATAAGCAAACATTTGAAAATAAGAGCTAAAAATCAAAAATAATCTCTCTTTT
TGCTGATAAATACTTTATACCTAAATAACCTAAGATTTTTTTTTTTTTTTTGGAGACAGAG
TCTTGGCTCTGTCACCAGGCTGGAGTGCAGTGGTGAATCCCGGCTCACTGGAACCTCC
GCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCTCCTGAGAAGCTGGGATTACAGGCA
TGCCACCGTGCCTGGCTATT

Sequence 741

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAATACAGTATAAATCATGCT
CCTGCTGTCTAGAGCTTACCACCAACGAGGGCTTCAGATAAGATCAGCAACTGCCCTAG
AGTGTGGAACCTCCTATGACAAGGTGAGCCTGGGGTGTGATGGAAACACGGCGTGCATGGT
TACCAAGCCACGCTTCCAGGGAAAGGGTCCGTGCGGGAAAACTTCAGAGAGGAAATGA
CATGTCAGTCAATAACCTGAAAGAACTGGNTGAGAGTTAAGCANCAGGGAACAAGGGCAC
AGTNNTCACACAGCTTTTTGGAAGATCATGTTGNTTATAGTGCAAAAAAATACTGAAT
ATGGGAAACAATTTGTTATTATTTTTAGGAGTNTTGCTTGTCCCCAGGCTGGAGTGC
A

Sequence 742

ACTACTATTGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTAATTTGGGGGGAAAA
AGAGTTACAATTTGCCATAAAGAATGGAGAGAACAGAAATGTANCTTTTATGCTGAAAA
ACAAAATGCAAGGGCAATCCAGTTTCTAATTCCTGTGCCAAAGCTGCTGTTCTTGATGAC
CTCGGTCAAATCATTTAAATCTCTCAATTTGTTATATAAAAGTGCTATTAACCTGCAG
TTCCTTCAAATACTATCCAATCAATGTTGGCTACTTGATTTTCA

Sequence 743

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTATTCACAGGGTATGCATAAA

TABLE 1
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CCAAATATACAAGAATTTAATGACAGCATTATTTGCAAACAGTGAAAGATTCTGAGCAAT
CAAAAGGTTTCATTACTACAGGCATAGGTCTATAAATTACTACTGTATGGAATACTATGCA
GCCATTAAATAATGAGGAAGAGGGAGAGTGCCCTGTATGCACTGACATGGAAAGGTTTC
AGTATATGGTAAAAAGCAGCTCATCTTAGAACAGATTTTATAGTATGACCCCACTTGTGT
GGAAATATTTTGTGATGTGCCACTCAGTGTATACGTATTCATGAGTGCATATACAAGTGT
GTGAGAAGCAATGTAAGTAAGTGTTCACAAGGACCCCCCTTTAAGAAGGCAGAGGGGA
TCGGGGGATATAGAGTGAAGGGATGATTTTTGCTTTTTCTCTA

Sequence 744

CCGCGGTGGCGGCCGAGGTACGCGGGAGGAAAGGGCTGTGTTTATGGGAAGCCAGTAACA
CTGTGGCCTACTATCTCTCCGTGGTGCCATCTACATTTTTGGGACTCGGGAATTATGAG
GTAGAGGTGGAGGCGGAGCCGGATGTNAGAGGTCCTGAAATAGTCACCATGGGGGAAAT
GATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCCGATCGCTTTTTGGCCTTGATGATT
GAAA

Sequence 745

CCGGGCAGGTACACAGTAAGTGAAGGGCCAAGACTGACGGCTGATAGGACAGGGGTGACC
AGNGGTGGGGAGGGTAGTGGGAGCAGTCCATCCTGGAATCTGGCATTCAAGGGGCGCATT
GTCTGTGGGAGGATTTAAAAATAATAAAACCAACTAAAGGCAGTCTGCTTTTTATGGTCA
CCAGGCCGCCAGCAATTCTAAATTTCAAGTATAAAATATTCCTCCTCACTGGACACGAGA
AGCTGGCTTTCTCCTTATCCCCAGTACCTTNGGCCCGCTTCTAGAACTAGGTGGGATC
CCCCCGGGGCTGCAGGGAATTTCCGATATTCAAAGCCTTATCCGAATACCCGTGACCC
TTTNGANGGGGGG

Sequence 746

CGGTAATACTNGTTATCCACAGCAATCAGGGGGGATTAATCGCAGCNAAAGAACATTGTT
NAGCAAAAAGGGCCAGTCAACAAGGGCCAGGAACTCGTAAATAAAGGCCGCGGTTGCTN
GGNCGTTTTNTCCCATAGGGCTTCCGCCCCCCTTGGACGAGGCNTACCAAAAAATTC
GACCGCTCAAAGTCANGAAGGTGGCGGAAACNCCGACAGGGACCTATNAAAGGATACCAA
GGCCGTTTTTCCCCCTTGGGAAGGCTCCCCTNNTTGCCGCTCTCCTGTTCCNGACCCTTGC
TCGCTTACCGGATACCTGTCCCGCCTTTTCTCCCTTTCGG

Sequence 747

CCGCGGNGGCGGCCGAGGTACATCTTTGGTGACTTTTCATTACATTTTCATGGATAATTT
GGGGAGGTGGCCTGCCANCCCTGAAGCCCTACATCCCATAACACTCTGTGCACATCCA
GTGCCCTGCTCCACCATGGCAGTGCCCGCAAGGGGGTCCCAGATGAGAAGAAGCTGGCTA
AAGGGCCCTTGTCCCTCTCAGACTCCTTCAGCGGGCTGGAGTCCCTCCCTCGCTCGATTT
CGCCCGAGAGCGTTAGGGGTTTCTAAATGCAGGCGCCTTTGTGTTGTAACGAACTTTTA
GTTTAAGGGAAAATCTCTTTAAGCCACTGATTGTTCTGACTTGCTGAGTTTACTCAGCA
GCCTTATGCTGGCTCTGCCACTGCACAATAAAACCAAAGCANGACAGTTGCAGNTNAAGC
AAGGGGGAACATGTTTTGCATT

Sequence 748

GCCCGGCATGGTACCTGTGTGGAAAAGAATGCTTGCAAAGCTTGTACCCTCACGAGAA
TTCTGTGACAGACATTTGCCTTTGACAGTGAAAACAGATATTAAGTGAAAGGAGAAGA
AACCGAAGAGCATCAGAGGGGACGACTGGGTACTTAAGTGTGGGGAGCAATCTGAGGA
GTTGGTTACCAGAGAACTGGCGATGGCGATCCCGTGAGCAACATCTCTCAGACCCATTT
TAAATGCCGGGGGATACTTAATCATGCTGAAAAACAGCAGAGCCCTTGAGGTTTTTGA
CTACATGTTGCAGAAAGAAAGAAGNAATTTNTACCTTNCCNAAAAATAAAATATNNA
NNNNGGTACCTCGGGCCCGGTTTTNAAGTGGGATTNCCCCCGGGCTTGAAGGAATTC
GNTNTTCAAAGCCTTNTTCGATCCCCGTCCNANCCTCNANGGGGGGGGGC

Sequence 749

AGGTACTTTTTTTTTTTTTTTTTTTTGGNCTAACTGNNNGGAGTATTTCTTTACCCAA
GATAAGTAAAAGCTACAACCTCTTAGTATAAATATGNGTCCAAGTGCCTNATAACTGCTAA
CCACAGGGATCCTGAGCTCTNATAGCTTAAACACACAGNGTNNAATTTTACTGGTCTACTT
CTCCTGNAGACCTAAAAGGGCCTATAGCCTCAGTAGTTGACAAAACAACATATTAATTAAT

TABLE 1

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CCTCACTGATCACTAACATAACCTAAAATCCCTGCTTTTGACATTAGCATGGNANACATC
CTTAGCAGGCCTAAATAGAATGGCCTTATAAGTGGATCCAAAGGGC

Sequence 750

AGGTACATCACCCCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGT
CAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTG
GTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTGGTGGAGCAAGTCTTT
CTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGAC
ATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAG
CACTTCTACCTGAATTTACCATCACCAACCTACCATATCCCAGGACAAAGCCCAGCCA
GGCACCAACCAATTA

Sequence 751

GTGTCCGGAATCCTACCCGGTGTGNNGACAGTGCCTGATAGTTTCTTCTGCCTTTCTATC
CCAAAACGATTGGTCAGTTTACCCAAGTTTGCAATGCAGTTTANAATCTCCCAGGAACAT
CTCTTCTAGTAGTTGCCTTAGCCATCTTGTAGTTGATTTGACTTTTTTTTTTTTGTCTNN
CAGAAAGCTCTATGCTTCATATGGACTTGCATACCAATTTTTTTGTTCTATCTGTTGGTCAT
GATGGTTAGCAGAGCCTGACCTCCTGTTACAATAGAATGATCGGTTTCTGGGCTACAGAC
TTGAGTCTGTTTTTTTTGTTTTTAAACCTTCCCATGNGGCAATTTGCCATATGCAAAAC
T

Sequence 752

CCGGGCAGGTACGCGGGTGAAAATGGAATAGTTTTCTAATTACAGAAAGAAAAGAAGTTG
AAGTGGGTTTCGCCATGTTGAGCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCAGCT
CGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCACGCCTGGCCAAAAAT
CTTATAAATAATCCCCTTCTAATTTCCGCCAGCTTAATCACACACCAAAATTCCTTTCATG
AGATTAATCTTCCACAACCTTCTACACTTCCTTAAATCTTTGATTTTGTCTATACTTCTT
TTTTTATATTAGCAATCTACTTTAGGACAGAAATTTACTTTCTTTCTCTTGATTTGA
CCAAAGTCCTCTCTTAT

Sequence 753

TAGTTTTCTAATTACAGAAAGAAAAGAAGTTGAAGTGGGTTTCGCCATGTTGAGCAGGCT
GGTCTCGAACTCCTGACCTCAGGTGATCAGCTCGCCTCAGCCTCCCAAAGTGCTGGGATT
ACAGGCATGAGCCACCACGCCTGGCCAAAAATCTTATAAATAATCCCCTTCTAATTTCCG
CCAGCTTAATCACACACCAAAATTCCTTTCTGAGATTAATCTTCCACAACCTTCTACACTT
CCTTAAATCTTTGATTTTGTCTATACTTCTTTTTTATATTAGCAATCTACTTTAGGAC
AGAAATTTACTTTCTTTCTCTTGATTTTGACCAAAG

Sequence 754

CCGGGCAGGTACCTATATGATGTTGGCCATGCTCACTCACTCCTCCAACCCTCAGTTTAC
ACATCTGCAAAATGAGATACTTCTTTTCCAGTGTTGCTGTGGACATTAGCAGGCACACAC
ATTTGGTGCTTGACAAATGAGGTCTAAGAGGTGGGTCCCTCTCATCTTACGTGAGGAA
ACTGAAGCAGATTAGAAATGACCCAAGGAAACCACTCCGAGTTCAGTCTGGAGCCCCTC
CCCTAGGTTTTAATCATCCCCCAACTCAGTCCCTATCTGCTGAGGTTCTTGATCCAGAC
GGTCTTACCAAGGAACGTCTGTCCTCACCACATGGATGGTTTTCTGGCAGAGGTGTG
CCCTGTGAGGGGGTCA

Sequence 755

GCCGAGGTACANACAAGGGGGCNACTGNCATGGGGGNGGNNTCTGGTCTTGTAAGTCNGTT
TGGAATTTTCTAAGTCAGGGTGGGGTGGGGGGACTGTGCACGGGTCATGTGCAGACTGGA
ACCCATCTCCCCCTCGGTCTGCAAGTTAAACAATTGGGTTGTCTTCTCAGCATCTGCC
AATGTCTCTTANTCAATCTTGGATCAAAAGGGCGTTGGAGGAGGAGGCTGGGAGGGAAAT
CCAGACAGTTCTCCGCCTCTGACATCAGGTCCAGCTGTTAGCATCGTGCTGTGGGTCCCT
GAACAAGAAGCAAAGTCAGGACT

Sequence 756

AGGTACCGCTGTGTCCGGGTGGGTGGNGGAATGCCGTGCTCCAGGTGTTACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC

TABLE 1
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CAACTGGGTTTCCCAAGCTATGTAAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAG
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGT

Sequence 757

AGGTACCTCTGGATATGTTAACTGAGANAGATACTTCATCACTTACATGATATTGCTCC
CCCACAAATTTATAACCTGAATCTAGTTATAAGGAAATACTATGCAACCCAAATTGAGG
GACATTCTGCAAAACAACTACCTGTAATCTTTTTTTTTTTTTTTTGGACGGAGTCTCA
CTCTGTCGTGAGGCTGGAGTGCAGTGGCGCGATCTCAGCTCACTGCAACTTCTGCCCCCG
GGGTGCGAGCGATTCTTCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCACACGCCA
CCACGCCAGCTAATTTTTGTTGGGGTTTACCATGTTGGCCAGGATGGTCTCCATCTCT
TGACC

Sequence 758

CCGGGCAGGTACTATGGTCCCCGGCAACCTCCCCTTCCTCCTGGGAATGCTCAAATGGGA
AGGCAGCATGAAACGGTGAACAGGCAATCACTGGACAAAGTCACAAGAACTGGGCTTAG
AAATGGTTTTACCATTAGCAGTTGTGACACCTCAGAAGTGGCAACTCTGGATCTNAATAC
CCTACCCTTNACCCTAAGNANAGGTACCTCCNCTNATTTTNNCGGGGGGAAACNTTCTNGG
GAANTTNCCCTTTCCNAAAAAGGGGGGGGGGGGCTCTTTTTTTTTTTTTTGGGGGGGGG
CCCCNNCNCNCCCCCCCCNTTTTTTTTTNTNAAAGGGGGNTTNAANANANATTTCTNTNC
TCNTTNTTTTTNTNANGNNAAAAAANTCNGGTNGNGNGTTTTTTTTTTTANAAAAA

Sequence 759

GGCGGCCGAGGTACAAAGAAAGGACTTGATAGCTATTACCTTGCTGCTATGTTTGTTNCT
TNGNCTACCAATCATTNTNTGTATACCTAGCACTGCACCAGGCGCTGAGGTTAGAGAA
ATAACTAAACTGCGCCCTTCACCCCTGATGGCAGGATAGGCAAGTTGGCACCATCGTC
ACAGCAGGACCCTCATCGATGCCTTGGTGTGTGCCTGGCATGGNGTTTGCAGCAGTTTAT
CACATNNAATCCTTACAGC

Sequence 760

AGGTACTCAGGCCTTACTGGGATTTCTTTAAGACCTCTGGGAGGAAGTGTGAGTAGCTG
GGCAGGCCTTCTTGGCAAGCATTCTCCCTGGGTTGTGGCGGGGGCTCCCGGCCTGCTGT
GTGGCAGCTGCAGGCTCCTGGGGACCTGAAGGAAAAGCTTAACCGTTCTCCCTTCCCTTG
CTTGGCACTTAGAGCACTAGTTCCATTCCAGACATACCGATTATCTTGCCTACGTGGCAT
AGAGGCCTAGGAGCCTCCCTGGGAGGAAGAGGCAGGCCAAGGTCTTGCCTGGCTGCTTTT
AGGGGGAAAGATGTAGGGAGGAAGCTGCCTTATGCTTGGATCTGCAACCTTTGCCTGGAC
CTGCGGAGCCTATTTTGGCCAGGGGGAGGGAGACAGAAATTANACCCNANGTATTNAGGT
AATCCTTTTNTTGCCTTTGAACATTGCNCGGGNGTACTTTGNAAAAA

Sequence 761

CTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGTGAAAAAT
GGAATAGTTTTCTAATTACAGAAAGAAAAGAAGTTGGAGNGGTTTCGCCATGTTGAGCA
GGCTGGTCTCGAACTCCTGACCTCAGGTGATCAGCTCGCCTCAGCCTCCCAAAGTGCTGG
GATTACAGGCATGAGCCACCACGCCTGGCCAAAAATCTTATAAATAATCCCCCTTCTAATT
TCGGCCAGCTTAATCACACACCAAATTCCTTTCATGAGATTAACTTCCACAACCTTCTAC
ACTTCCTTAAATCTTTGATTTTGTCTATACTTCTTTTTTATATTAGCAATCTACTTTA
GGACAGAAATTTACTTTCTTTCCTCTTGATTTTGACCAAAGTCCTCTCTTATGCAAAAT
GAAAAATTAATCTTTTTCAACTTTCTTTACCAAAAATACATCCTCATAACTTTTTTCC
ATCTCTCCTACTTACTGG

Sequence 762

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGTGAAAAAT
GGAATAGTTTTCTAATTACAGAAAGAAAAGAAGGGGGNGTGGGNTTNTGCCATGTTGAGC
ANGCTGGNCTCGAACTCCTGACCTCAGGNGATCAGCTCGCCTNAGCCTCCNAAAGTGCTG
GGATTACAGGCATGAGCCACCACGCCTGGCCAAAAATNTTATNAATAATCCCCCTTCTAAT

TABLE 1

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TNCGGNCANCTTAATCACACACCAAATTCCTTTTCATGAGATTAACTNNCACAANTNCTA
CACTTNCTTAAATNNTTGGATNNTGNCCTATACTTNTTTTTTATATTNGCAATCTACTTT
AGGACAGAAATTTACTTTCTTTCTCTTGNNTTTTGACCAANGTNCTNTCTTNTGCAAAA
TGNANAATNNCTNNTTTTTCAACTTTCTTTACCAAAA

Sequence 763

TTAGGGCGATTGNAGCTCCCCGCGGTGGCGGCCGAGGTACATGTAATGCTCCTGAACTGT
ATGCTNGACACGGCTGTCTACNTAGGTTTTGTTCTGTGTATTTTATGACTATTTTTTAA
AAAGTAAACAAAAAGAATTAGCTGGAAATACCAGCACAGGCAAACCCCTGGAGACAGAA
AGCAGGTGAGTGGTTGCTGGGGCTTGAGCAGGAGGAAGGGCGAGGGACTGCAGAAATGGCC
ATGGGCTTTGCCCTTAGCATGATGAGAATGTTCTGGAATTAGACAGTGGTAACGCTTGT
TCAACACTGCCAGTGTAGTTAATGTCACTGAATTATACACTTTAAATGGCTAACATGACC
AATTTTATGTTATATATATTTTACTACCACAAAAAACTAGCTGGCACCTAAAAACATTC
CATT

Sequence 764

CCGCGGTGGCGGCCGAGGTACTTGGATGGGTTTTGTGTGTATGTTTGTGTGTGCACTNGC
GTCCACCCTGTTGGGCTTAGTGAACTTTTGATTCAGTGATTTAAAGTTTCTCATCAGAT
TTGGAAAATTCCTCAATTACTTTTTCTTAAATATTTCTCTTGCCCTTCCCCTCTCTCTT
CTTCCAGGATTCCAATTCATCGATGTT

Sequence 765

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGGTTCAAGCG
ATTCTCATGCCTCAGCCTCCCAAGTAGCTGGGACTAAAGGTATCCACCACCACGCCTGGC
TAATTTTTGTATTTTAGTAGAGATGGGGTTTACCATGTTGATCAGGCTGGTCTCGAAC
TCCGGCCTCAAGTGATCTGCTCGCCTTGGCCTCCCAAAAGTGCTGGGATTACAGGCATGA
GCAGCTGTGCCAGCTGGATAATTATTTAATAAATTGGGGAGCATAGGAAGCATAGTATT
TGTGAAGTGGTGGCAGGTGTGATGGGGGTAGGTGATGTTACATTTGGGGCATTTTGAA
GTTGGTGGTTCTTCTGAGTTGAGCAGTCAGTCACCTTTCATTTGCTGCACCTTTATCTCA
TTTTAGCCAACAGACATTGAATACCTACCAAGTCTTAGGTATTTGCA

Sequence 766

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGAAA
GAAAACAAATACCAAGTATTTACAGATCCAGAGAAAGTTCACAAGAATGGGAGGATGCCA
GTTCCAATGCTTTGTAAAGTCAAAAATAGCCACATTGCAAAACAAACAAAAAAAACGAG
AACGTTCCCGAGTGTGCCTCCAAAACATAAAGGAGAAAATCATACAGAAAAACCTCATGT
AAGGGTTGGAACCTTGAGCAACCAGCTATCCAAATACAGAGGGGAATCCTCGCTTAGCTAG
GGCATGGCCTGAG

Sequence 767

AGGTACACACAGTGATTTGGGGTCCTTTTTCTTAAACAGCTTCTTTATCAGGACTTTGG
AATTCTGGGTGAGATAGAAACACTGAAAACAGGGCGGAAGTTTTTCTTCTGGCTTCTTA
GTCCATGGAGGGCTCAGCGTGGAGAGGATATGCCGTGGCATTCTCCCTGGGAGACCACAC
ATGTTCCCGACAGCTCAGACCCAGACCCGCACATGCTTCTTGACAGTTNAAACCCCAAA
CCGNAGGNGCTCCCGACAGNTNAAACCCCANACCCCGCGTACCTGCCCCG

Sequence 768

CCGCGGTGGCGGCCGAGGTACTTAATAATTACATAATTTAGCCATGATAGTATCTAAGCTC
ACTTTCAGAAATTATTGCATACATGCCTTAGGGAAGAACCTATCCACTAATGCTTTTAATA
ACTTACATAGATTGTGTTGCGGCAAGTCAAGTTTTAATATAGAGGAAAGGGTTTATCTTA
TCATAGTAAATAGTAGTGATGTGTTTCAATTTTACTATTTGCATGGTATATTATCAAGG
CTGTAAAAGCTTGAATTTGCCTTTTCCACATCTTCATTTCAAATTAATTTTTGTGAGGAC
CCAGAGAAGTGGGTAGAACCCAAATGCCCATGNNGGT

Sequence 769

GGCANGGTACAAATTCAGGGGAGGATGGAGCAGCTGCAAGCCTGGCTGGCATCCCATGCC
AACAAAGGTGACCCAGTAGATAAGTGACAAGGTGACTGAGCTGCCTGGTGCTCTTGATAG
AATTTTCAAGTGTTAGAAAAATGTCTCCATGCCTTGCAATTTGTCTCTTGTTGGCCAAGCC

TABLE 1
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TAACTCAGATGGAAATGCAGAAATCACCCGCTCTTCTGCGTCGCTCACGCTGGGAGCTGTA
GACCGGAGCTTGTCTAATTNGGCNATTTGGGTTCTNTCCCCCGGGNNCNTN

Sequence 770

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTTTTTTTTT
TTTTTTTTTTTGGAGNGGAGTCTCACTCTGTTGACCAGGCTGGAGTGCAGTGGCACAAT
CTTGGCTCACTGCAACCTCTGCCTCCCGGGTTCAAACGGGTCTCCTGCCTCAGCCTCCCA
AGTAGCTGGGACTACAGGCGCATGGTGCCACTCCCGGCTAGTATTTGTATTTAGTAGA
GACGGGGGTTTTACTGTGTTGTCCAGGCTGGACTCGAACTCCTGAGCTNAGGCAATCCAC
CAGCCTCAGCCTCCCAAAGTGCTGGCATTACAGGCATGAGCCACCGTGCCTGGCCTCTTT
CATATTTTTTTTACACTTTTCATTTCTTCTTATTTAAGTGNGCTGGATAGGGGCTCCAG
AACAGAATTCAAATAGAAAGTTGTGACAGTAGGAACCTTATCTTGGTCCCTGATTTTAA
GGAGGGTTNAAAAAAAACCCCCCAA

Sequence 771

ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCAGGTACTTTTTTTTT
TTTTTTTTTTGGAGAGAGGGGGTTTCACTATGTTGCCTAGGCTGGTCTTGAACCTCCTGGC
CTCAAGAGATCCTCTTGCTCATCCTTCAAAGTGCTGGGATTACAAGCGGGAGCCACTG
TGCTGGCCTAGAAGATCTGTTTTCTTTCTCTGAATAATTCTTGTGACACTGTCTCTCC
CTCCATCTCTTTCTGTTTCTTGTCATTTTCCAGCTATCCTTTTTCTTGNCTTGTCT
CTCTTCTCCCCTCCATCCTAAAACCTTTGATCACAAGCTAGTTTCTTTCCACATCATCT
GCTCCCCTCTACTAAACGCTATTTGCCCCCACCTGCTTCAAGCTGNGCTTGCTCTGA
GCCCCCTTTTACCACGGCCCAA

Sequence 772

NCTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTCATGCTAGACAA
CCTTATGACTTGAAAACAAAATAATATTTGAAATGGAAATGGCCTCAGTTCCACCCCTGG
TGCCACATAGCATAGTGAACCTGCCCTGCAGCATTGCCATGAGTGCTAAGATCCTGT
GCCATTTGCATGTCTTCTTAAACAAAAGACCGCCTTAGTAAGAAATTAGTAAACCAGG
GAGATAATCAACTTATCCCCAAAAGATTTAAGCCTCTCATTTTGTTTAACCTTCATTGG
GGATTTTAAATAGAAAAGTAGGGCCCGGCGAGGTGGCACATGCCTGTAATTCAGTACCT
GCCCGGCCGCTCTAGAACTAG

Sequence 773

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGG
ACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTTGCT
TCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCT
CCTCCAATTTGGACCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCT
CATTCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGT
CATCAGTTTATCAACCAACAAGCAG

Sequence 774

AGGTACGCGGGGAGTGAACGCTCTCGGAGAACCCTTTCCACGAACGTCCACTTCAAAG
AACGCGACGGAGCATTAACCTCTGCCACTGACCCCTGGCCTGCCTTCGCCTCCTCCTTC
CTCCTCTACCTCCTCCAGGCGCATTACCGCCTCTCTGCCTTCGGCCAGCAGTTTCTATT
TAATCTACCGCCAATGCCGGATTTATCGCTCCACTGTTCACTGTCACCCCTCCTCGGGAC
GCCCGGGGTGAATCANACCAAGTTTTATTNCGAAGAGGAAGCGGAACCTCAAGCACTGTTT
CTACAAAGGCTATGTCAATACCAACTCCGAGCACACGGCCGCTCTAGAACTAGTG

Sequence 775

CCGCGGTGGCGGCCGCCGGGCAGGTACACTACTGGCATAAGAGTAAATTGGTGAGAACT
TTCTGGAGGGGTAGTTTGGCAATGTGTTTCCAAAAATCTAAAAATTATATTTGCCTCTA
ATCCAGCAATTATACCTCTAGAAATTAATACTAAGGAAAATCTTAAGAATATACCGTAA
ACTTTAGTTTGAAGAAATTTTTTGTGGCCAGGCATGGTGGCTCACACCTGTAATCCAG
ACTTTGGGAGACCAAGGTGGGCGGATCTCCTGACCTCATGATCCACCCGCTCGACCTCC
CAAAGTGCTGGGATTACAGGCGTGAGCAAATTTTAAATAAGAAGAAACAGTCAACAGCAT
CAGACATAGTAGGTATGTCCAACACCATAATGGCTGAAAAGTGCCCCCTAGTCTGGCAAT

TABLE 1
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TAGTAGGTCATTGGTTTATTAATAACCGGCATGTTAAAGTTG

Sequence 776

CCGCGGTGGCGGCCGGCAGGTACAAATCATACCTCCCAAGGTATTGCTCCATTGTGTTTT
TGTGCATTTGGTTTGGATTTTTATGGGGAATTGAAGACAAGTGGATCATAAAGTGCAAAA
TAAATGCTCTAGAAATGACAGATGGGGCACAATTTCCAAGAAAATTCATCTAGACAGTG
GCAACACTGAGAAAAAAAAGAAACATTCAAGAAG

Sequence 777

GAATTGGAGCTCNC CGCGGTGGCGGCCGCCGGGCAGGTACTTTTTTTTTTTTTTTTTT
TGCTAGAGATGGGGTTCACCATGTTGGCCAGGCTGGTCTCGAACTCCTGGCCACAAGTGA
TCCACCTGTCTCAGCCCCCCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACTCCTGGC
CCATGTTTAGGATTTATACCAATATTATTAACCTAGAAATAAGTTTCTAATAAATTATTC
CACCCGAACCTTAGGGTAACCTGAATTTAATGCTGATGTATTAAGCAGGTTCTTCCTGGGG
TCTTTTGATTCTCAAGGGATCCTTCACTGNGGGTGGACTTCAAATTAATAGGAAGCAGGA
AGGAGCCACCTGCACTGTTTCTTGACTGGGGATGACACCNAAACCTT

Sequence 778

CCGCGGTGGCGGCCGAGGTACTATGAGAATTTCAAACAAAGAATGAAGCCATAAAACAAA
AAGACTGAATATTTGGCTCTGCCTGGCTCCCAGGCTTTCTACTATTCTTGACTTGGCC
TCAACAAATCTAAAGTGACTTGTTATTTGTGGGTGAGCTTTGTCCCATCCTTACCAGTC
ATGGCTTTAGACAAAAGACTCAGCACCACTCACCTNTGGGACAGTNTGACTGNGGTCTG
AGNCCCCTGCTTANATATTAGGCTTAAGCTCAGTT

Sequence 779

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTATGAGAATTTCA
AACAAAGAATGAAGCCATAAAACAAAAAGACTGAATATTTGGCTCTGCCTGGCTCCCAGG
CTTTCTACTATTCTTGACTTGGCCTCAACAAAATCTAAAGTGACTTGTTATTTGTGGG
TCAGCTTTGTCCCATCCTTACCAGTCATGGCTTTAGACAAAAGACTCAGCACCACTCACC
CTCTGGGACAGTCTGACTGTGGTCTGAGGCCCTTGCTTAGATATTAGGCTTCAGCTCAG
TTCC

Sequence 780

TNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACACACAGTC
AGCATGCGCTGTAGCAATGTGCTTTGCAGCTGGAACCTCTATCAAGCATCCTAGGCAAGG
CATGCACCCCAAGCGCCAGAGAGAATCAGGAAGGGGAAGGTGCCCTGAACCTCAGACAAGA
ACCCCTTCCAGAAACCACCACCAAGCCATCACTGTGTTTCCACCCTCAGACCTGTGTCT
CTTTAGCTTCTTGGTAGAAGGAAAGAAGAGGAGCTTGGGTGGGGCAG

Sequence 781

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCATGGACAT
GCACCCCGGCCACAGAGAGGCGCACAACCTTNTACAGAACACCCTTCCACCTGGTCTTCCA
CAGCTGCATCAGATTCTGGACTGTCACAGACATGACTTCAAACCTGAAAGTTGCAAGAT
CTCCTGGAACAATTTCCACAATGCATACAACCTTATTCTTAGCCTCAAGCACTGAATTAG
ACTCCATGTCTACTCCCATGGCCGTATAACTGTCATTGGAACCAAGCCTGNNCACTCCAT
CCTNTGGANNNTTAAACNTTNAANAANNNAANCNNCCCTNGGCNTTTTTTAAAAANN
GGNNNCCCCCGGNNNGGAAATTTTTTTTAAANATTTTTTTCCCCCCCCCCCCNNGG
GGGGGGGGCCCCCCCCCCCCCTTTTTT

Sequence 782

NAATTGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACTTCCCTGAGCAGTCGAAGTGG
ATGCCAGACCAATGGCCAGTGCTAATATCAATGCAATGATCCAATGACGATGATTGGA
AAAACTTCAATGGCAGCAGTGACAGGATCTGTGCAGCAACAGCATCTGCATCTGGTGCA
ACAGGACTTATTTTCAAATCATCAAGGCCAAAAAGCGATCGGAATGAGAAGGGGGCTTCA
ACAGCAGGCGGATCATTTTCCCCCATGGTGACTATTTCAGGAC

Sequence 783

CNATTGAGCTCCCCGCGGTGGCGGCCGAGGNCTGATGTCTACAGTCCTCTACCTGATCT
ACGTTCACTGGAAAGTGTNGAGTCTCAGCAGGAAGCACCTTGCTCTCGTGTCGGCTAAT

TABLE 1

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TCGAGTGCTTTACGTAAGTAGAGGAATTGCTGACTTTTGGGACATTTCTGGTCTTGCCAA
AGTTCACCTTGTAGTAAAGCCCCCAAAGATACTTCCCAAATAGATGCTCTCTTGAAAAATA
ACTCAG

Sequence 784

CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGTCGGCCTATTTTA
TATTCTGTTTAGTGCTTTCAACCCCGAAATCCACCTTCTAACATTAATATTGATATCCAT
CCTCTCTCTCCTCCAACCTCTCTCTCTTGCATTTACTTTTAGATTTTCATTACTTTCT
TTTTATTCTGATTCTTGTAATAGTATAAACTAGATTCTTTTATTTTATTTACTTTTAA
AATTTATGATTGACACATAATAATTGTATATATTTATGGGGCACAACGTGATGTTTCGGT
GCATGTATACATAGTATAATGATCAAATTAGGGTAGTTACCATATCCATTACTTTAAACA
TTTATCATTTCTTTGTGGTAACAACATTAAAAATCTCATCTAGAATGGCGTGAACCCCTGG
AGGCAGAGCTTGCAGTGAGACGAGATGGGCGCCACTGCCTCCAGACTGGGCGGACGAGCG
AGACCTCCCNCTCTCAAAAAAAAAAAAAAAGG

Sequence 785

GCTCCCCGCGGTGGCGGCCGCGCAGGTACGAAATGAGAGAAATGGTTTAGTAAACGTATAA
GACATCAACATAGNAAAGTATTCTATAGGNNTATGTGTTGGAATTACAAAGATGAAGAAA
AGATACAGGCAAGTATTTGATATACTNAATTAATAATAGCAAGATGTAGAGTAGNCATGT
ATACAGTGATAGCAAGAACATGGATCCTTAAGGACAAAACCTGAAACATAATGCAAAAAAA
GAAAAATATGCAATTATTTTTCGTATGATGTAAGTTGTAAATAT

Sequence 786

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGNGTACNCGGGCCTATTTCTGAA
TAACTCAGNGGCTTAAATATATCCCAAAGTAGNGGTATCACAGGGTTTCCTGATGAGG
ATAAATGGGCCTGAAGTGCTTATGGGCACCCACTATGTATCATGGNAAAACCTGCACGTG
TGTGTGTGTTGAGAGAGAGAGAAAAANAATAGANAAAGTTGGTGAGAAAAGGGNAGG
CTGTTTTTTGNNCCGAGGGNTGTNTGGTTGGGCTTT

Sequence 787

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGNACACANTAAGTGAAGGGCC
AAGACTGACGGCTGATAGGACAGGGGTGACCAGTGGTGGGGAGGGTAGTGGGAGCAGTCC
ATCCTGGAATCTGGCATTCAAGGGGCGCATTGTCTGTGGAGGATTTAAAAATAATAAAAC
CAACTAAAGGCAGTCTGCTTTTTATGGTCACCAGGCGCCAGCAATTCTAAATTTCAGTGA
TAAAATATTCCTCCTCACTGGACACGAGAAGCTGGCTTNTCCTATTCCCAGTACCTGCC
CG

Sequence 788

GGNGGCGGCCCGCCCGGTTTTGGACGCGGGTNTNTGCCCTNACTTTTTTAGCGGAGCAGAG
GAAACATTCTAAGGAAATATGCGAGTAGAGCTCAGGAGAAAAGCAGGACTAGAGGCCCA
AGAATCACAGGCCAGAAGAAGAAGCTGTAGCCTCGGGAATGGAAGAGCTCTCTGAAGGGG
AAAGGGGAGAACAGGAATGTNCCAGGAGCCAAGGCTCATCTATAAGGGACTTNCACATTT
AGGATGTAGAAGAAGGAAGCAGAAGCAGGGGATGACCAGAAATGGCCCCAGAGATGAGAT
GAAAGTTAGGAGAGCGGNGAGCAAGCCTTTAGGTTTCAAGGGAAGGAGGGAAAGTAGG
TGTTAGGTGCTGCCAAGATCAGGGAAAATAAGCAGAAGACCAGGCCATTTNANTTGCGN
TGG

Sequence 789

CCGCGGTGGCGGCCGAGGTACCACAATCAACTCAATCACACATATTACAACAAAACCTT
TCATCTTTTTCTTAACCCACTGTAACACAAAGCAGAGAATACAGATTAGCTTTTTTATT
TGTCTGTTTGACTTCATCTCTTACATACCTCTATTTCAGTATCTATGATATTTTCTCTT
CTTATCTGTTCAATGACAGTCTTCCCTTTTAAATATTCTAAACTTGTCAAGCACAGCANTT
AAAAAAGTATTCTCATGTATATTTTTATCTTTAGAGCATCGCATAAAGNCTGATACATA
GGAAGTTTTAGATGCATATTTACATTGGGTAGATGAATCCAGGGGAAAAG

Sequence 790

CCGCGGTGGCGGCCCGCCCGGCGCAGGTACTGCCCAAGAGAGACGTCTCTTACTGCCTCATT
AAGCATTTGGAGCTGTAAACACAAATCAAGGCAACCAGAAAGGGCATCTTGGCTTCAGG

TABLE 1

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CTGGGCATAACCATCCCATTGCCCACATAAAAGTCTAGTGGCTACTCTGCACCCTTTCTG
GGTAGAAGCAGAGTTAGTTTGGTCATGGGGGGCCCTGTGGGACAGTGTTGCCCAGACAGG
TACCTCGGCCGCTCTAGAACTAG

Sequence 791

AACCCACTATAGGGNTNATNGGAGCTCCCCGCGGTGGCGGGCCGCCCTGGCAGGTACTGNC
TGTCTCAAATTTTTGGATACGCTGTCCCTCATGTACCTAGCTGCTGAGAGCTTTGTGAT
CCTAACAGGTGATGACTCAGACCGACACTGCATTGGTAGGAATCCACAAATAGGTGCCT
CAATGTGCCTAGATTGAAATATCAGCCTTTCCAGACTGACCTGATGGGTTGACTTCAGG
TGTGGTGTAACACCTACATTTTAATGTAACATTTCAAGTGAATCAATGAGAACTATCA
TTCTGCTTTAATCACCATGAGTTCTGAAATAACAAAGGATTTGTCTGACATTCATTCTAA
GAAATTCATTCTTACCTGACTAAGAACTTTTAACTGGCACAATAATAAGAAATGACC
TGGNAAGTACCTCGGCCGCTCTAAACTAAGGTGGGATCCCCC

Sequence 792

NGGCGAATTGGAGCTNCCCGCGGTGGCGGGCCGCCGGGCAGGTACGCGGGCAAATGTAA
GTTGGTAAAAGACATTGGACTCCAGCTATGTTCTTAGAAAGAAGGTATTGGACTCTGGC
CATGTTCTTCAGAAAGAACATGCCTGGCTTTTACGATTTGATCAGTCTTCTTAGACCC
TGAACCCACCATGAAATGGCTTCCCAGACACAACCCGAGAGAGTTATGCTTTGTTCT
CAGCTAAATATTTTGCAGATCTTAATTTCTGGGTCAATGCATCATTTTTTTTTTTTTT
T

Sequence 793

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGCCGGGCAGGTACCAAGTATACCTTTT
CATTTAAATCATTGAACAGTTCACAATGGCTGTTGTAAAGTTTTGCCTTGTTACTGAA
CCATCATCTCTTGGTCTATTTCTATGGAGTTATTTTTCTAGTTATTGGCAGTTTGCTT
ATCTTTTATGTGTCTAATAACTTTTAATTGAATGTAGAACATTATGGATCTTATATTTT
GAGAATCTGAATGTTTAAATTCCTTTGAAGAGTTTGTGTTTTCTTCTGGAGGCAGTTTA
CTTACTGGCTGTGAGCTCAGTCCTGTTGAGGCTGTTTNGCGACNNNCTGTGGCTTTGTCA
GGGTGGGGTGGTGGATCAGACATCTGGTCATCAAC

Sequence 794

ACNCCCGGCCAAAAGGGAGNNCACAGGGGGGGGCCAATATATAAGGGGGGCAAGGAGGGG
GGGNNGGGNAAAGANGNCAAACCCCNCCNNGGGGNNNGGGGGGGAGGGGNAANAAAGA
AGGNNGGGGNGNCCANGCAACCNAAGGGACNAACCCAACANNNAAGCGGGGGAAGGGG
CACGANAGANANANANNANAGGNGANNCAAGAACCAANCAAGGGNNGGGGGGGAAGGGC
NNCAAANGGGNNNAANNGGCNCAGGNNACCNAANGGGGGGNNNGGGGCNNAGAANGGG
GGNNGGGGNNANGGAAANNAANNCNGGANNNAAACCAAGGGGAAGGGAGGGGGNNGGAAA
NCAAGGCCCCCGGGGNCAAAACAAAAAGNNGGGGGGAAAAANACAANCNGGGNNNGGNCA
GGAGGGGAGGNNANNAGCCGCGCGNAAAAAAAAAAAAACAANCCAGGGGCAANGGGGNN
GGGGNGGCNAANGCCNCCNNGGGGNAAANCCCNANGGNGNACCCNNGGAGGGNNGGGNN
GGGGGGGCNCNGAAGGGAAAAANAACCCCAAGGGAAAAANCCANGGAANGGGNAANAAG
GGGGGNGGCAAGNGGGNANCCCGNAAAAANAAGGGGAAACNNGGGGANNGNCCAAAAAC
CCNNGG

Sequence 795

CCGCGGTGGCGCGGAGGTACTATCTCTTAGGAGAAGGCTGACTTGAAGGCTGTGAAAAA
CTAAGAAAACACCAACCATTCAACAGTATACTAGAATTCCTTTCAATGCATAATAGAAAC
AAGAAGGGATTAGAAAAGCATGTCATAATTTCCAGATAGCATAATTATTTACATTAAAGA
TCCAAGAGACTCAGACCTAGTAAAAGATTTTGGCCACATTGTGACATTTGAGATCACATT
AAAAAAAAAAGGAAAAATCAAGNGATACTAACATACCAATTAACATCATNAATTAGAA
AATTTATCCATCAGCNGTATTNNNNNGGGCTCAATGCNTTGAATGCCGCATTTCGGGAG
GC

Sequence 796

CCCCCCCCGAGTTTCAGCGAAAAANCCCGGCCGAGGNACCNCNCCNTTACNCCCAGGNTT
ANAAACNCCNNGGTNTNGNCCAGGAGAGGCGGGGANCACCGCGCCNGGCCAGCANGGN

TABLE 1
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CCCCTNCTAAATNNNGNNGTNNAAGGAANCNGGACCCCAAANNCCGCCCCCACGAAAG
GAGCCTGGGAACCTACCAGGGCGTGAGCTCACCNGCCCCGGCCGCTCTAGAACGAGAAGGA
ACCCCGGGGCTGCAGGAAAAACNATAACAAGCNAANCNAACCCGACCACCCCAAGGGGG
GGGCCCCGGGACCCAGCTGTTTGGGCCCTCAANACNAGGGAAAAAATTGCGCGCTAAGNGCN
CAANCANGGGCCAAAANGCTGGNTNCCCCGGAGGGGAAAAAAGGACACTCCCGCGNCACA
AATTACCACNCAAAACATAACNGAAGCCGGNNAANCAATAAAANNGGGGAAAAANACCCC
NGGGGTGGCCCTAAAAGGAGGGGGAGCCCCAACCAACAAAATAAATTGGGGG

Sequence 797

AGGTACTATCTCTTAGGAGAAGGCTGACTTGAAGGCTGTGAAAACTAAGAAAAACACCAA
CCATTCAACAGTATACTAGAATTCCTTTCAATGCATAATAGAAACAAGAAGGGATTAGAA
AAGCATGTCTAATTTCCAGATAGCATAATTATTACATTAAGATCCAAGAGACTCAGA
CCTAGTAAAAGATTTTGGCCACATTGTGACATTTGAGATCACATTAAGAAAAAAGGAA
AATCAAGTGATACTAACATCACCAATTAACATCATCAATTAGAAAATTTATCCATCAGC
CGGGTGTGGG

Sequence 798

GCGGCCGAGGTACAATTCAACAATTNNTGGTCCAGGATCATGAATGGGCCATTNNTAGTT
CTGTGTGTGCTTAAACACATTTTTTTGTGGGGTGCTGTGGATGTGTGGATGTAGCCAAAA
AAAACCCTATTGTGGGNTNGGTCCTGGGGCAGAAAGTCTGGTGCCAGAGAGTGGGGTTCT
GGGGGTCTGTCTTCATAGTTTGGGGTAGCACTAAAATCCTGTGAGCCTTTCTGGGCCTTG
GTAACCTCCCCTGTAAGTTAGCTGTTAGATAATTGAGCTGGGTAGCATTTTATACCTGGA
TGATGTTCTAAAGTCCAGCCACANAAGGCCNNNGTCTGGCAGAGTGAGAATTNCCTTTGA
AGAACCTTNAACCTGNTNCCCNAGAGTGACACAGGGGNNCCTNNGGGGAAAAANCNAAAAAG
NNNTTGGGAATTCTNTNCAAAAGNAAGNCCCATTTTTTTTTGCNNNATTNNGCCCNCG
NTAATNCCCCNCCCCAAGNAAAAANAAAAAANTNTTTTTTTTTTTTT

Sequence 799

CGGTGGCGGCCGCCGGGCTTGGTACCCTCTGTACGGCTTCCCTTTGCTGGAAAAGGGA
ATTTCCCAACCCCGGGTGAGGCAATGCCCGCCCTGCTCCGTGGGCTGCACCTGCTGTCT
GTCAAGCCCCAATGAGATGAACCCTGTACGCGGGGGCCTGGGATCTCAAATGGCGGCC
CGTGCGGAAACAGCGTNTGGGAGCAGANATTGTTGCCTCCTGAA

Sequence 800

GGGCGNTTTGGAGCTCCCNCGGTGGCGGCCGGGCAGGTACTATCTGGAACNTGTAGCTT
CCTTTNGCACTGCAGCATGGGAAGCCAGAGTTGATGATTCATACACCAGCATTTACATTT
TTCAGCATGAAAGTGGTATGTTCTTCAACTCACAACCCATTGGCCAGAACCAGTAACATG
ACTTCACCTAACTGCAAACTAGCTGGAGAATTGTGGGAGAGCTCATGG

Sequence 801

CCGCGGTGGCGGCCGAGGTACCATTTAGCACACAATTTCCATGTCCCAAAGCAACCCCC
ATAAACAGTGACTATTTTTATGCTGTTTTCTTTGCCCAACACTTTTATCATTTGATA
TGTTATATCTTGCTTTTTTTTTCTTTTTAATGGAGTCTCACTCTGTCACCCAGGCTG
CAGTGCAAGTGGCGGATCTTGGCTCACTGNAACCTCTGCCTCCTGGGTTCAAGCAATTCT
CCTGGGGGGTGGGGAGGTTTGCAAGTGATCCAAGATTGCGGCTCTTCACTCCAGACTGGG
NGAAAGAACGAAACTCCATCTNAAAAAAAAAAAAAAAAAAGTACCTNCCCGGGGCCGG
CCGCTCTANAAGTGGT

Sequence 802

CCGCGGTGGCGGCCGCCGGGAGGACGCGGGATGGTGTCAACTTATGTCAGGACCCATG
GGCCCTCCCCATGCACACAGCACTCTTGAATCTCATCTTTTCCATGGCTCTGGCTCAC
ACTTCCACAGCATTTACTCCTAAATATGCCCCCTGGGTTCAAGGGTGATTCTCGTGCCTC
AGCCTCTCAGGTAACCTGGGATTACAGGCATGCACCACCATGCCTCGATTTTTTTTGTGT
GTGTGTTTAGTAGAGACGTGTTTCACTATGTTGTCCGGGCTGATCTCCAACCTCCTGTAGT
CAAGTGATCTGCCCGCTCAGCCTCCCAAAGTGCTGGGATTATAGACATGAGCCACCACA
CCTGATGTCTGATGCTTATTTATTATGTGACCTTAGCGAAGTGTTGGGTAGTCATTAGTGC
TGGTCTATCTCTATACCTTCCCCAGGCAAGGTAGGATTGCACTTCCCGTCCACT

TABLE 1

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Sequence 803

AACGACCGCCCGGGCAGGTAAGCCAGGACCTCAGTTAGCACTAAGCACTCTTACTAT
TGCCCCACCTGGCACAAAGCAAAGTGAAGATCTTAGTTGGGCCCATCATGTGTCATCTGA
TTGTCTTAGAAGTTCTTTTTTCTAAGACAGAGTTTTGCTCTTTTGGCTCAGGCTGGAGT
CCAATGGCACAAATCTCGGCTTACTGCAACCTCCGCCTCCAGGTTAAAAGCGATCCTCCC
GCCTCAGCCCTNCGAGTAGCCGGGACCACAGGCACCCGCCACCACGCCCGGNTAACCTT

Sequence 804

TACTATAGGGCGAATTGGANCTCCCCGCGGTGGCGGGCCCGGGCAAGGTAAGTCTCTAT
GACTATCAAGCTCAGGCCTCTCCCTTTTTTAAACCAAAGTCTGGCAACCAAGAGCAGCA
GCTCCATGGCCTCCTTGCCCCAGATCAGCCTGGGTGAGGGGACATAGTGTATTGTTTGG
AAACTGCAGACCACAAGGTGCGGGTCTATCCCACTTCCTAGTGCTCCCCACATTCCCCAT
CAGGGCTTCCTCACGTGGACAGGTGTGCTAGTCCAGGCAGTTCAGTTGCAGTTTCCTTGT
CCTCATGCTTCGGGGATGGGAGCCACGCCTGAAGTAGAGTTCAGGCTGGATACATGTGCT
CACCTGCTGCTCTTGTCTTCTAAGAGACAGAGAGTGGGGCAGATGGAGGAGAAGAAAGT
GAGGAATGAAGTAGCATAGCATTCTGCCAAAAGGGGCCCCAGNTTCTTAATTTAAGCAA
CTAAGAAG

Sequence 805

CCGGGCAGGTACAATGGACTTTGACAGTTCTTCCCAAACAGATCCTAATTTTAAACATTA
GGTTTGCTTTGATTCTTTTCCCTGGGGCTAAGAGCTCACAAAGACTTAGGTTCTGGTCAT
GGCTCCAGAGGCCACACATTCCAGGACAAAGTCTCTCTACAGTCAACGCCTTAGTCCCAC
ATCTGTAAATCGGAATAATCATCCCTGATCCAGCTATCACATTGCAGTAGAGTGAGACT
CAAATGAGATAATGGAAGACAGTGGGAATGATCATTTCCAAGTGGCCTGGCTGACCCAT
TCCTTGTTCTAAAGTCAGCTCAGGTTTCACTCTTCCAGNGAAGTTGACCTGGCACTTTC
TTTTAGGATGGCTACTGCTCCTCTGGGTGCCCGGGGCTCANTGTCTCCCCATCACCGCC
CATGGCACACTTGGAGTGACTGGTCCTTTACTTTGNTT

Sequence 806

TNCGGGCAAGGTACATTGGCCCCAAAGAGNAGGAATTCCTTGAGAGGAGCTTGAGATG
CTTNCCCTCCAGCGGAGAAGCAGGCCAGAGAAACCTCCGAAGCGGGCCTCCGCCACTTTG
AGAGTGATGAAACCGTCATGGTGCTGGGAGCCTGGGGCAGGAGGTCACAAGAGTTGCC
CCAGGGCTGTGCTTTAGTTCTCCAGACAACCTCCCTTCCACTCTGGTCTCACACACCCCA
GCCTTACCCTGCGTCAGTGGACAAGGGGGTAGGAGCCTGCAGAGCAGAAAAGTACCT

Sequence 807

AGCNCCACCGCGGTGGCGGCCGANGTACGCGGGATATGTAGAACTTCACNNGTTTGAAGT
TGGCTGATTAAATATACTAAGTATTACTGAATCACTGCCCTGCCTTTTCTGCTTTCTTTA
CAGACCTGTTTAGTATACACTGTATGTATTTTTTTTTTTTTTTTGGAGACTCCGTCTCAA
AAAGAGAAAATTATGGGCCGGGCACAGTGGTTCATGCCTGTAATTCAGCATTTTGGGAG
GCCGAGGCAGGTGGATCACCTGAGGTTGGGAGTTCGAGACTAGCTTGGCCAACATGACGA
AACCCTGTNTGTACCTGCCCC

Sequence 808

CCGCGGTGGCGGCCGAGGTACGAGACTTGTACCATGTGACATGGCAGCTTCAGAACTT
AGCCACTGCCAAAAAAGAGCAGGCAGGGATAATGTTGTCCATTGTCCAGTCAGAGAGA
CCTGTTGAGTCTCTAGTTTGCCAGTCCCCAAGAGACCTTTGGAGTTTTGCTGGAGCCAGA
CATCCTGCTTAGAGATGAGGAAGATCCTGCTGTTCCGTGGGGAGCTCTTGAGACACCCGT
GCCACCACCCACCTTCTCCTGATTGCCACTTGCTGCCCTTTTCCATTACCTCTCCTGA
CTCCATAAACATCTTCAAGTCTTCCCTTTCTCCACCCCAAAAAATGCCACCTTGGAAAG
GG

Sequence 809

AAATTAATTGGGGTTGNGCTAACTGCCCGTTTTTCAATCNGNAAACCTTGTGGGGCCCA
NNTGAATTAANANAATNGGNCCACCCCCCGGGGAAAAGGGNGGTTTTNNAANTTTTGGG
GCCTTTTTCCCTTTTTTAAAAA

Sequence 810

TABLE 1
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CCGCGGTGGCGGCCGCCCGGNCACGGTACGCGGGGATGTCTTCTGAGAGAGTCAGGGCAG
CTGAAGACTGGGTGAGGGTGAGGGAAGCCGCTGGTGTCTCCTCAGTCACCCGTGAGAGG
ACTCCTNTGTGGAGCTAATCAACTGCAAGGAAGATTGTTCCAGTGTCCAGACCTGAAGG
AGTCTGGACCCATAGTGCANTGAGATTTGGGGAAGGAAGGATTCCGGATAGGGGTGAGCT
TTNTGNTGATAAGCAAATGTGAAC

Sequence 811

CCGCGGTGGCGGCCGCCCGGNCAGGTACGCGGGGGTGTATTATGGGAAGCCAGTAACACTG
TGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTGGGACTCGGGAATTATGAGGTA
GAGGTGGAGGCGGAGCCGGATGTCAGAGGTCTGAAATAGTCACCATGGGGGAAAATGAT
CCGCCTGCTGTTGAAGCCCCCTTNTNATCCGATCGCTTTTTGGCCTTGATGATTTGAAA
ATA

Sequence 812

CCNTCAGGTACCAGANCTTAGCAGGGATTTTGGACAACAAAAGCTCTAAATCCTCTTGCA
TCGACACGTTCAATTTGCACTGACCAATCTGTTGGCACAGTAACTGTTTATAAGCTAAAT
TTCTACATTTTGGCTACAAGTATCCCAAATCCACCTTTTAAAAATCCTAGGTAGATGCC
ATCTGGTGTTAATGATTTGCACACCCCTTAAATTGAAAATATTTTAAATAAATCTCACGG
TTTTATATAGTATCATTAAATGTGTCTATTTTAAAAAGACAATCTGAGAATAACACTTCCC
CTAATTGTTGTCTTAATAATGACCAAGAGCTGAGGAAAAATGATTCACTGTTAGTTGT
TTTGTGTTTTGCTCACGGGGGAAGGGGGTGAAGTACTGGCTGTGCCTGGGTTTG

Sequence 813

CCGGGCAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAAA
GGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTCC
GTGTCGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTGGTGGAGCAA
GTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTG
GTGGACATCCATGTGGCAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGC
ACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATATCCCAGGACAAAGCC
CAGCCAGGCACCACCAATTACCAGAGGAACAAA

Sequence 814

CCGCGGTGGCGGCCGAGGTACATTATTCATATCCAGCACTCCCTGCGGCTGCTGCTGGAG
GAGCAGTTATCCAACAAGGACTGTTTCAACCTCATCGCGTTTGGAAAGCACAATTGAAAGC
TGGAGGCCTGAGATGGTTCCCGTGAGTCACAACAATTTACAAAGTGCCTGGCGGTAGGTT
ATGGGCAGAGACTTCGTGGGGCTGTGTCTGAGGGAAGGTTTGAGGCATTGTTTTCTCTG
TCCCCCTCTCCACCAAGAAGTAGCTCTCTAGAGTCCCTGACCCCAAACAGCCATGGGCAG
AAATCAGAAAACAGCTTCTTCTGTCTGCTGCTCTCCCCACCTGGCCATCTTCACTTTAT
GAGAGTAATGACATCGACTCCATCACGTCTGAGATGGGAAAAAGGCTCTTCAGCTACTCC
CAAAAGGGTATGCCCTGGGCATGGG

Sequence 815

CCGCGGTGGCGGCCGAGGTACTCTTTTTTTTTTTTTTTTTTTTGGAGACAGGGTTTCTGTT
GCCCAGGCTGGAGTGCAGTGGCACAATCTCAGCCCACTGCAGCCTCCGCCTCCCAGTTG
CAATAATTCTCATGCCTCAGCCTCCCAAAGTGGTGGGATTACAGGCGTGAGCCACTGCGC
CCGGCCACCTTTCTATTTTCTGGTTAACTTTCTAAATGTTTGAAATGGCTTCCAGTGAA
TTTCATTTTATTATTGGGGGAACTTCCATACTTATTTTCTTTCTTCCCAAATCTCCACA
AGTATACTCTCCTCCCAAATTTAGATAGTTGTATTTTCTGATTATTCCAAATAAGAGT
GCTGAGAGGCTAATCACAAAGAGCAACAGCCAGAGATTTACAAAGTGGTTCTCTTACTAT
TGAACATTTTCACTTAT

Sequence 816

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTGCCAGGTAAGATCAC
TCGTGGGTAAGAACATGAGGTTCTACCCGTAAGGCAGGATTTTATAGAAGGAAGGTAG
GTCTTTCAACCTATGTCCTCCTTCTGTTCCACAAAGTGGAAAGCCACAAGCCCTACAAAA
GCCTTGCAAGTCCCAGAGGCTGCAGCCGTATTTATTCTTCAGGCCAAGACTCTCAGGACA
GAGAGCACCCATGCACCCCGCAGGCTGCAGGCCATCTCCCTGCATTTGGGACTGTCCTGA

TABLE 1
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GGATGGCGGCTTCATTTTTGTCCCTCCTACCTCTGA

Sequence 817

GAACCTAGGGCGATTTGGAGCTACCCNCGGTGGCGGCCGAGGTACATTTTGCAAACCGT
GAAGGGCTTTNTTTTTNGCAGGTTGGACTTCCCCCCCCTAGTNGGCAGGATTTTTTTAG
GGGACCACCTGAGAAAGGTCTGTTACCGTGCATAAACCTCCTTTAACACCTTTAAAAAC
TCTTCTGGGGGCCGGAAGTCACTGGCTCATGCCTGTAATCCCACCACTTTGGGAGGCTGAG
GCAGATGGATCACCTGAAGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCC
GTCTCTACTAAAAATAGAAAAATTAGCCAGGAGTGGTGGCAGGTCCCTGTAATCCCACT
ACTTGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGC

Sequence 818

GCCAGGAAACCCGTAAAAAGGGCCCNGTTTGTGGCGGTTTTTTTCCATAAGGGTTTCCG
CCCCCTTGACCGAGGCANTTAACAAAAAATNGACNGCTTCAANGTCAGAAGGTGGGC

Sequence 819

CCCCCGGTGGCGGCCCGCCGGGCAGGTACTGGGAAATGAGGCAAAAGTNTNTCTCTTCA
CTGCTAGCTCCTTGGGGACCAGCAAGCGGCTCTCAAGTTGCGTGGTGGCCCACTGGAAA
AAAGGCAGTTCGGTGCATCCTGGGAATATCCAGGTGAAAGTGTGAGATTTACCTAGAATA
GCTTCTGGGCCTCTGGGGTTTTACGCTGTCTCTGGTGAAGGTGTCCATTTTGAAGTGA
AGCAAAAAGGTTTCAATCCGTTCCGTTTTCTTTGTTTTAGCACTTACCCCAGNNNCCTCC
ATAACAAAGGTGGNGCCCCTCAGGGAAATTAATTTTTTTTTTNTAAAGGCCTTGGCAT
TAANCCNTTTTTTTTGNNGGNNGGNAANTTTTTTTTTT

Sequence 820

TAGGGCGNTTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACAT
CCAGGNCAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACGCATTCCGCTTCTG
TCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTC
CAATTTGGACCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATT
CCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATC
AGTTTATCAACCAACAAGCAGTTCAGCACCCAGCACTTTTTACCTGAATTTTAC

Sequence 821

CCGCGGTGGCGGCCCGCCGGGCAGGTACGCGGGCATGCAAACTCCAGATTCCTATCTTC
TTTGGGGGAAAAGCAAATTGGAAGCTCTGACAATGCTGGGCTTTACTTTCCACATAGCA
ACCATCAGTTGGAGCTGAGACACCTCTGCTCTCTTTAGAAAGAATTATTAATGCTTCAGT
CTCCATTATTGCTTCCCTAACAGTGAGGATAAGTTATTGGCATCAANCCTGGCCGGTTTA
NCTTGGGGGTTTATTTTNTNNNTTGGGGCCTNAAAACCCCGGGGGGNNCCTTTTTGGCN
CNGNGGGGGGGGGGAANTNTNNNANNANGGNNGGGGGGGGTTTNTCTCNNCCCCCCCCCA
CNTNTTTTTTTTTTTTTTTT

Sequence 822

CCGGCAGGTACGCGGGGAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGTGTTTATGGGA
AGCCAGTAACACTGTGGCCTACTATCTCTCCGTGGTGCCATCTACATTTTGGGACTCG
GGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAAATAGTCACCA
TGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCGATCGCTTTTGGCC
TTGATGATTTGAAAATAAGTCCTGTTGCACCANATGCAGATGCTGNTGCTGCACAGANCC
TGTCAGTGTGCCATTGAAGTTTTTTTCCAATCATCGTCATTGGGATCATTGCATTGATA
TTAGCACTGGCCATTGGTCTGGGCATNCACTTCGACTGCTCAGGGAAGTACCTCGGCCG
CT

Sequence 823

ACACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTACGTGTT
AGCTATTATCATCACCTCCTTGCTAGGCAGAGCAGGACAGTGGGGAATTGATGTTTCCT
CCCCTCCATCTCACAGGTGGGGCAGGGGTGTGCTGAGAAGAGAACTTGGGACTCTTGGCC
CCTGTTCAATTCTCTGCTTAACCTGCTAGGCAATTTGGGCCTCTGAAAATTCAGTAATCC
TCATAGCAACTTAGACGTCACCTGGGCCTGTGGTCCCCTTCCTAGCCTAGGAGTCAGAGC
ATGAAGCTCCATCTGTACATTGGTTTGTTCAGAGAACTACACATGCGTTTTATTTAGC

TABLE 1
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AGCATACAGGTTCCCACTTAGGCATTGAGAGGACATAGGAAGCTGTTAACTTCCTA

Sequence 824

ATCACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAGTTATTTA
AATCCACTCATAACTTATCGGCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGTGG
AGCGGGAAGTGCAATCCTACCTTGCTGGGGAAGGTATAGAGATAGACCAGCACTAATGA
CTACCACACTTCGCTAAGGTCACATAATAAATAAGCATCAGACATCAGGTGTGGTGGCTC
ATGTCTATAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGAGT
TGGAGATCAGCCCGGACAACATAGTGAAACACGTCTCTACTAAAAACACACGCAAAAAA
TACGAGGCATGGTGGTGCATGCCTGTAATCCAGTTACCTGAGAGGCTGAGGCACGAGAA
TCACCCTTGAACCCAGGAGGCAGAGGTTGCAGTGACCGATATCATGTCACTGCAGTCCAG
CCTGGGTGACAGAGCGAGACCTTGTCTNAAAAAAAAAAAAAGAAA

Sequence 825

CCGCGGTGGCGGCCGAGGTACAGATGTATGGATCTCATAGCATTGAGGGGTCTTTCAGAT
TATGTTTTCAAACCCCTCACTTTCTCTTTTCAGATAAGACCACAGCGACCTGGGAAAGTG
CAACGTCTTAGCCAAAGACACAGAACTATTAGCGACACTGTCTAGACTCTAGTTTCCAT
GTCTCTGACTTCAGTCTAGTGTTCACCCCTGCCGCCACCCCTGCCCATCCTCATT
CTCCTGTAGGAGAGGCCAGACCTTTGCCTGCTGCAGCTTGTGGCTCTTCTCCTGCCTTCA
GTTNTTCCATTGCCTG

Sequence 826

GGGNNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACCTGTCTGGGCAACACT
GTCCCGNNGGGGCCCATGACCAAATAACTCTGCTTCTACCCAGAAAGGGTGACAGT
GGCCACTAGACTTTTATGTGGCAAATGGGATGGTTATGCCAGCCTGAAGCCAAGATGCC
CTTTCTGGTTGCCTTGATTTGTGTTTAACAGCTCAAATGCTTAATGAGGCAGTAAGAGA
CGTCTCTCTTGGGCAGTACCT

Sequence 827

CNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGGTGGTGTGGCTACTACCGTTACA
ACTGCCTGTGCTTGGACATGGACCCTCTGCAATATGCGGCAGTTTCATTATTGCCCT
ACATTCTACACCAAGTAGAAATGGAAGGCAATTGGATACTTCACAGACAAGATCTAAGTG
GAGAAGGAATGCGTCCTGTGGCTGCAGAGATCCTTGGAGCTTGGAGGGGAGAGCTTGAGC
CCCACTGATGATGACCTCCACAGCTCGCCAACCTCAGCCCTCCCTAAGTCCCCATCGGGG
GCCAATTCTCACTCTGGGGTTGGGGGGACTCCACCATAGCTCATCCATCATAGGGGATGT
TGGTATCTACTGTGGGTTTGGGTAGGGCCCGATGTGCTGAGGATGGCTCCCCACAAGCA
AGAGATGTGGGATTTGG

Sequence 828

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACA
TCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCT
GCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCT
CCAATTTGGACCCAGCCTGGTGGAGCANGTCTTTCNAGATANGACCCTGAATGCCTNAT
TCCATTGGGCTGGGGCTTCCACCTACCAAGTTGGGTGGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTTA
CCATCACCAACCTACCATATTTCCAGGACAAAGCCAGCCCGGCCCCCCCCC

Sequence 829

CGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACCTGATCTACTCCTCTCTACAACAAC
CTTGTGGGTGACGTTATTATCTCCATTTCAAAATGAGGCCACAGAGGTTCTAAAGGGTA
AATGACGATGATGATGAGAGGTAAGTGATAAAACAATGTCTCCTGACCACAAATCCTGGA
ATTTAAACATAAGNGTAGTAAACATGAACCTAGGAAGCCTCCTGGGGCTTCTNCCTGTG
TCTGGAGCCCCTGCACATGCCCAAAGGAAGTCCTTTTGGTTCTNCGNTCAGNAGAGAAAG
GGNGCATTCTACTAAAAGGGAGGTGGGGAAACAAGACTGGTGGTAGGG

Sequence 830

CCGCGGTGGCGGCCGAGGTACATTATTCATATCCAGCACTCCCTGCGGCTGCTGCTGGAG
GAGCAGTTATCCAACAAGGACTGTTTCAACCTCATCGCGTTTGAAGCACAAATTGAAAGC

TABLE 1
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TGGAGGCCTGAGATGGTTCCCGTGAGTCACAACAATTTACAAAGTGCCTGGCGGTAGGTT
ATGGGCAGAGACTTCGTGGGGCTGTGTCTGAGGGAAGGTTTGCAGGCATTGTTTTCTCTG
TCCCCCTCTCCACCAAGAAGTAGCTCTCTAGAGTCCCTGACCCCAAACAGCCATGGGCAG
AAATCAGAAAACAGCTTCCTTCTGTCTGCTGCTCTCCCCACCTGGCCATCTTCACITTTAT
GAGAGTAATGACATCGACTCCATTCACGTCTGAGATGGAAAAGGCTCTCAGCTACTCCCA
AAAGGTATGCCCTGGGCATGG

Sequence 831

CCGCGGTGGCGGCCGAGGTACGCGGGTAACAGGAGTCTTTGCTGAGTGATCATCTGTTTA
TTCITTTACTCCACAAATATCGAATGTTTACAGCGTGCCTGGCACTGAGCAGGGCTGGGG
TTTCCTGACCATATGGACCTTCTGGGTATATCTGTGGGGCTTGAATGGTGTGTGACCTT
GTGTCCTGCCCG

Sequence 832

CGGGCAGGTNCGCGGGGGTGTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTC
CGTGGTGCCATCTACATTTTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCC
GGATGTCAGAGGTCTGAAATAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGC
CCCCTTCTCATTCCGATCGCTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACC
AGATGCAGATGCTGTTGCTTGCACAGATCCTGTCACTGCTGCCATTGAAAGTTTTTINCA
ATCATCGNCATTGGGATCATTGCATTGGATATTAACCCCTGGNCAATNGGCTTGGGCATT
CAATTTGACTTGNTAAGGGAAGTNCCTCGGCCGNTNTANAACAGNGGGATCCCCCGGCT
GGANGAATTTCAATTTNAACTATTGATACCGTCCANCCTTGNGGGGGG

Sequence 833

ACCGCNGTGGCGGCCGCCGGGCAGGTACATCACCTGCTGAGGGACTTTTNNGGACAAG
GTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACC
AACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGAC
CCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTG
GGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTTATCA
AC

Sequence 834

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACCTTACCACCC
CATCCCCAGAGCATTGCATGGGGTGTTTGGCACACAGTAGGTGCTCAATGTAAACGTGTG
CACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGCCCGTTCTCTGCACCCCTCCCT
CCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGAGGGGCTGGGGCGCTGGTCTGA
TTGTGTGGGTGATTTGGGGAGATCTCTCCTCTTCCGGAACCCCAAAGGTTGGGACAAA
CACAGCAACAAGCCCAGCTCCCTGAATTTCAGTGATTCATTGTGGGGATAAAGGAGTGA
ATG

Sequence 835

CCGCGGTGGCGGCCGCCGGGCAGGTACTAGTTATTTTAAATCCACTCATAACTTATCG
GCCAAAAGTAGTCACATGGCTCCACCTAATCACAAGTGGAGCGGGAAGTGCAATCCTACC
TTGCCTGGGGAAGGTATAGAGATAGACCAGCACTAATGACTACCACACTTCGCTAAGGTC
ACATAATAAATAAGCATCAGACATCAGGTGTGGTGGCTCATGTCTATAATCCCAGCACTT
TGGGAGGCTGAGGCGGGCAGATCACTTGACTACAGGAGTTGGAGATCAGCCCGGACAACA
TAGTGAAACACGTCTCTACTAAAAACACACGCAAAAAAATACGAGGCATGGTGGTGCATG
CCTGTAATCCCAGTTACCTGAGAGGCTGAGGCACGAGAATCACCTTGAACCCAGGAGGC
AGAGGTTGCAGTGACCGATATCATGTCACTGCAGTCCAGCCTGGGGTGACAGAGCGAGAC
CTTTGTTTCAAAAAAAAAAAGAAG

Sequence 836

GNGGNGGCGGCCGAGGTACTTTAACANGCCATACTCCAGTCCCAACAATGTTAAATGCCA
AAGCAGTGTTGGTAAAAGCCTCAAATGGTGAAAAGGACAGAAACTCAAACCCGCCCTTGT
GCCAGTAAGTAACTGTTACTTATCTCACAAGCGCTTGGCTCTGGAAACAATCTAACTCT
GAGCTGCACGTGGAGTCTACATGGGAATGTGCAAAGCATGTATTTCTTTTAGGTGCAGC
AGAGGTAACCGAAATTCAGATAAGAGAAAAAATCCAGATTTCATGCAAGAGGTGGAA

TABLE 1

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GATCCACGAAGATACTCGTTACTATTTGGTTTCTAGGAGCAGGATTGCCACTAGATATGA
TGGAGAACAAAAATGAAGAGGTGTTGTGTAAACAAAACAAAACAAAACAAAAAGT
AGAAAGAAAGAGCAACAGGCCGGGCCGAGTANCTTCATGCCTGTAATCCCAGCACTTTT
GGGGAGGCCAG

Sequence 837

NTTGCCTTGCCTNACTGNCCCCGCTTTCCAGTNCGGNGTAAACCTGTCGTGCCAGCCTG
CATTAATGAAATCGGCNCAACGCGCGGGTGAGAGGCCGGTTTGCCTATTTGGGCCGCTCT
TCCCGCTTTCTCGCTCACCTGACTCCGCTGCGCCTCGGGTCGT

Sequence 838

CGCGGTGGCGGCCGAGGTACTAGGCACTGAAGATACAATAAGCAATCCAGNAATNCCTCT
TTGAAGAATTTATTCTGATGAAATAGAGACAAGCCTATTAAGTATTCAAGGCAACATTA
CTTAAATATTTTATTTATTTATTTATTTTAGATGGAGTCTCGCTGTTGTTGACCAGG
CTGAAGTG

Sequence 839

AGGTACCTGTAGTCCCANTTACTTTGGAGGCTAAGGTGGGAGGATGGCTTGTGCCAGGA
GGCGGAGGTCACAGTGAGCCGAGATCACACCACTGCACTCCAGCCTGGGCAATAGAGCCA
GGCCTTGTCTATAAATGAAATATAAATATAAATATAAATATAAATATAAATCGTTGTTGGC
AAAGATGTATTCAAAATAGTATGTAGAAGTACCTGGAAGGTAATTTTGAATATTTACC
AAAATATACTTTTCTAGTAAGGTCTCCTTCTCAGAATCAGTCTTAAAGCCATTCAA
ATACAGATTTATGATTAAGATTTAAGTCCAAAAATGCTCATTATAGCAATATTTATAAT
AGGAAAAATTGGGGAAAAACAATTATACATCCAACAGTAGTAAGAGTGTGACTACATTAT
AGTATTAGTATGTAATGGGATTGTCACAGAGCAACACACATGTTTTGAAGAATATTTAA
GGGCGTGATAAATATTAATGTAATGTAATGTAATGTAATGTAATGTAATGTAATGTAAT
TATGCATTTCTTTATGAAATTTTTNGATATACACAAAANAAAATAGTCATGCAATTTGCTT
CATGACGGGGACATATTTCTGAGAAATGTGCTGTTAGTCGGTTTC

Sequence 840

GGCGGCCGCCGGGCAGGNACANCTTCCGTGGGGGGGCGNAAAACCCCCACCNAANCA
AANAGCANCAAGGAAGAATTNNTTAAGGGCAGGGGGGGGAAGCCCCNAAAACCCNGANG
GCAAANNCCAGAGCNGNGGNNNAGCNCNAGNNNCGGGGAAGAGCAANCANNACCTTTTG
TGAGGTTTTNGGNGNNGGAGGGGGGAACCCCCCGANAAAAAACCCAGNAGCCCCCA
CNNAACAGGGGANGAANAAGAGGAAGGNAAGGANNNAANNAAGAGCCACAGNCCNGGAA
ACANGAAANCANNANNNCAGACANGCCNNNGAANANGNNGCCNACNNNAAAAGAGGNNN
GGNGCGCCANNNGGGGAGNAAANNNGGAANNANNAAAAAAAGGAAAANGNGAANGAAN
GAGGANAANANNNGGGGGAGGGNAAANGGGGCGGGGNNNAANGCCNAANAANANNNAGN
NNNNGGGGAGGGCCNG

Sequence 841

AGGTACCTTACCACCCCATCCCCAGAGCATTGCATGGGGTGTTTGGCACACAGTAGGTGC
TCAATGTAAACGTGTGCACTGTGGCATGTTAGAGCCAGACAGGATCTCATCCAGCCGTT
CTCTGCACCCCTCCCTCCCTCTCCAAGTAGCCCTGCTGTGGGTTCAAGTAAAGAGGGGC
TGGGGCGCTGGTCTGATTGTGTGGGTGATTTGGGGAGATCTTCTCTTCCGGAACCCC
AAAAGGTTGGGACAAACACAGCAACAAGCCCAGCTCCCTGAATTCAGTGATTCATTTGT
GGGATAAAGGAGTGAATGATAAAGTGAAGGACGACTGTCCCCGCG

Sequence 842

TAGGGCGAATTGGANCTCCCCGCGGTGGCGGCCGAGGTACTCCAAAAGGCTATGAAATN
GGGGAAAACCCAGGTGATTCATGCCTGCTTAGCTGCAGNATNTCAGTNGCANTAGGTGG
AACCCCAAACCCAGNGCANAGTGCCAGNGTCTGCTTNGGTGAGATATGAGTGTCAAGTCT
CGAACCAAGCAACCTATCNAAAGCCTGNGACACTCCTGGCCACAGGCGGNTGGTANAGGC
ATAGNANACTATTGCCAGGTGACGTGACTTCACAGATGCTGGGAAGCCTGCTGCCCCAT
CCAATACAATACTGCCCACTGTGCATAGAAACCAGATTCCAAAGTTAGAGCTTCGTTTTG
GCCATGAGTGCAATTTCACTGCAATGTTTTATCTTACTCAACTGCCAGGGTCAATTTAGG
TGGTAGGGCTAAATCTCCTTCTTATATTGGTCCAAATGATTTTTCTGATGCTGCATTC

TABLE 1
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CCGGA

Sequence 843

CCGCGGTGGCGGCCGCCGCGGCAGGTA CTGTGCTTAGACCAGGAACACAGGGAGGTAGAG
GGCAGCAGAGCAGGGACTGGCTTCAGAGCCAGACAGGTGGCTATGTGACTTAATGTGTCT
GAACCCTGGTATCCTAGTCTATTTAAATGGTATAACAGCAGCTTCTAGTATGTAAGTTCCT
TGTCGGGAGAAAACTGTTTTGCTCATGGCTGGAGCCTTAGCATGTTGCATCATATTGAA
CATGTAATAGATGCTCAATAAATATATTTTTAAGAATAAATAAATGTAAATGAAAATTAC
TTCACAGTGTCTCTGTAGAGATTTTATAAGATATGGTATACACAATGCATAACATAGGAA
CTGACGCTCAAAAATGCCAGTTACTTCCATCATTGNGTCATAGGCTTTTATGTTCAATTAT
CCTGCTGCATCATCCCAAAGAA

Sequence 844

CCGCGGTGGCGGCCGAGGTACGCGGGAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGT
GTTTATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGNGGTGCCATCTACATTT
TTGGGACTCGGGAATTATGAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAA
NTAGTCACCATGGGGGAAAATGATCCGCCTGCTGTTGAAGCCCCCTTCTCATTCCGATCG
CTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACCAGATGCANATGCTGTTGCT
GCACAGATCCTGTCACCTGCTGCCATTGAA

Sequence 845

CCGCGGTGGCGGCCGCCGGGCAGGTACTTCTAACCTAAGGGATTCTACAGCTTTTCT
GCATGTTAAATAGTCTGTTTATGCTTATTCTTATTACTTGCTTGGTTTTACTTTGA
AAGTTTGCTTAATAATCATGGGAATATTTAGATTTTAAAATACAAAATATACAAGCTAA
ACTTGAGAGCAGTTTTTAGTTGTAGAACTGTTTCTGAAGTAATTGACTTAGCGTTTGC
TCTGCCTCTTTCTTTCTTACCTAGGTAGGTAGTGGGGACTCCTTCAATTATCTGAGCAA
TTCAAATCTCAGAATGTAGTGTTGGGTAAATTGAGGGTT

Sequence 846

CCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGTCACCACA
CTCTACAAAGGCAGTCAACTACATGACACATTCGCTTCTGCCTGGTCACCAACTTGACG
ATGGA CTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTG
GTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACC
TACCAGTTGGNGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGC
AGCTCCAGCACCCAGCACTTCTACCTGAATTTACCA

Sequence 847

TGGAGCTCNCCGCGGTGGCGGCCGNGGTA

Sequence 848

CCGCGGTGGCGGCTGTGGACTGAAGGGTGA CTGGTTCCACTGTGGTCTCCATGGGAACAA
GTTGTTTCTGGAGTCTTCCAAGGAGAATTTCTCACAGTGGACCTGATCTCTGGGCTGATG
CTGGGTTCTTGGAGCTCATGATTTTGAGAGTGGTAGACATTTCTGGGCTTCTGGGGAT
GTGCCTGCTGGACTGCTCCCCGTCTCCTCTGCTGGGGCAGGCCACGTGGAATTTCTTGT
GCTGCCTGGCTTGACATCTTTA

Sequence 849

CCGCGGTGGCGGCCGAGGTACCTGAAGAATCTCTCTTCAGCTCTCTTCTCCTGGAAACTT
GAGTGGGGCAGGAGGAAAAGCGGAGCTAGGTGTCATTTTAATGAGGAACATACTTGTCTC
CTCCATTTATCTGGCCCTCCCTGATGGCACTCCAGAATTCGAATCCACACGATTAACAA
CATAGTTTCCCTTTTCTGCTTGAAGGTCCATTCTCCTCTCAATTTCAAATCACTGAGAT
ACAAAGCTGCATTTCCCAACAAGAACCAGTTCCTCTCCTTTTCTTCAGTGCTACTGTCC
TTCTCTCAGACCACCAAGCTTAAAAACTCCAGAGGCTCAAACAGCAAAGATGGCAGCCCG
CTCCTCCCTCTGGGGAGTTCTGGCCAGGGAGTTTTCAAATTTCTGTAGGCGGAAGAATA
CTAGCGGGGAGTGGCTGGAGACCCAGTTGGTAGGGNTCCACATTTGGGGGAAGTGAGCC

TABLE 1
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CAAGCTTTTN

Sequence 850

CCGGGCAGGTACATGAAAGTAAGATCACAAACCACAGGAACCACACAAAATTCAAGGCACC
AGAGGAGCCCAGACTTGGCTGGCAATGCCTGTTTTGGAGCTATTCCACATTTCTGGAAGT
.CAATGGGAATACCGGAATATGAAAACTATGAGGCCGGGCACAGTGGCTCAGCCTGTA
ATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCATGAGGTCAGGAGTTCGAGACTAGC
CTGGCCAACATAGTGAACCCCATCTTTAATAAAAAATACAAAAAATTAGCCGGGCGTGGT
GGGGGGTGCCTGTAATCCCAGCTACTCCGGCGGCTGAGGCAGGAGAATTGCTTGACCTC
GGC

Sequence 851

CCGGGCAGGTACTTTTTCTTTTTCTTTTTTTTTTTGAGTGGGGCGGGGTTTCGCCA
TGTTGGCCAGGCTGGTCTTGAATCTCGGGTGATCTGCCCGCCTCGGCCTCCAGGGTGCT
GGGATTGCAGGCGTGAGCCACCACGCCCGGCCTCGATATATTCTTACAGTGGAATACTGC
TCAGAAATACTGATGAATCTTAAAAAACATGATGTTTAGCAAAAGAACCTTGGTATAAGG
TTCTTGGTATAAGGGATACATACTCTATGATTCCATTATATGAAATTCTAGAACAGGAAA
AACTATAGTGAAAAACAATCAGATTAGTGGTATCTGGGGTAGAAAGTAGGAGGAGATTGA
TT

Sequence 852

CNANAGGGGCTTTTTGGGGGGCAAAACCGCGGNGGCGGCCGCNCNAGAACNAGNNGGANCCCT
 NTTGGGGGGGGAAAAAACCCCAAGCCACCGANACCGNCGACCNCGAGGGGGGTNCCGG
 NACCCAGNNGNNNGNCCCCATAAANAGAGGGNNAANNNGCGCGCNGGCGNAANCANGGNCAN
 AGCNGNANNCCNGNGAANNNGNANCCGCNCACAATTTNTCTTTTNTAGNCGAGCCGGG
 AGCAGAAAGCCCAAGAAAAAGN

Sequence 853

AGGTACCCACAGCCCTTTCTTTTGGAAATCCCTAGAAAGGGGTCTGTGCCACATACAGGAA
GTAGGGAGGGTGTCTTTCAGCATATTTCTTCTTGGAGTTAACTGCGAACGTTGCACG
GCGACCTCTTGATCCATTCTGTGAAAGCCCCAAGCCTGTCATGCAATAAAGACGTCCAGT
TTCACCGCAGCAGGGAGGCCGCATGAAATATTCACCTTGAACAAAACCACTTAGCAGTTT
ACATCAATGCTTACCCTGTCGCATTGAAAGTGATGTGAACCCACACCCAAGAGCCCCCAA
ACCAGCACGTTGATACCAAGTTTCCCCAGCTGCATCCAAATCAATTCCTTCTT

Sequence 854

[illegible]

Sequence 855

CCGGGCAGGTACGCGGGCTACACACACAGTTCGGATGCCAAGGGTGACACCCCATTCCT
TCACAAGAGGCGGTTCTGTCAAAATCAGCACTCCACCCCCACCACACCTCTCAGTGAAT
GAAGTGCTGGTGGTCTCACTCCCCTGGTGACCTTAGCCGTGGGATGGGGTGGTTAACT
AAGGCTTCAAGCTGAGAATGGCCATCATGGCGGGAGGCTGTTTGCAAAGGCACCTTCTGT
CATCCTGGGGTTGGCTAAGTCAACTCCACCCCTTCCCAAAAAAAAAAAAAAAAAAGTACCT

Sequence 856

GCCAGGATTCAAACCAGGGANTTTGCTCCAGCACTCCGGCTCTTAACCTCAACCGTCTGC
CTCTCCACAAACACCAGGATCAACCACCAAGACCAAAAAACAGTCTCACAAACCATCAA
ACATTGCACTTGGTGGCTCAGGACCTTAGCTTCGTCTTAAAGGTCCCTGTTATGCTTTT
CTTTTGCCCCAGTGTGGAGTGGTCTTCGTGTTTGTGAGTGCAGGGGTGAGGGGTTGTGT
CTTTTCTTCTGTNCCCTTCCAAGAGGTGACATGTATCCTTGATACTGGAAGGGCCCTT

Sequence 857

AGGTACGCGGGCACTCCAGCCTAGGCAACAGAGCCAGATTCTTTTTTTTTTTTTTTAAAA
AGTCTTTTAAAAAATTCTTTATTGTGCTGATTTTATTGTGCATGAAGTGAATATCGC
ATGTAGGTATGTGTCAAGTATACAGAGTGTCAAGGCATACGGTGTTCAAGTCATAAGCAGTT
CTGGCCTTTGGCCCTGCACTGTTTGTGGCTTTTAGGTAGGAACCTTCTTAGAGTAAGA
CTGTCATGCTAAAATTGTAGCAATCAAATGTGCCCCCATACAACCTATTTGAGGTTGAG
ATTATGTTGCTAGAGTGGAGGAGATTGGAGTGTTCTAAATGCTAACAGTTTGTCTTGCCCT

[illegible]

GGCAGGTACAACCTCCATCCCCTGGGCTCAAGCGATCCTCCCATTTCAGCTCCCCCTGTA
GCTGGGACTACAGACACACACCACCGTGGCTGGCTAATTTTTGTATTTTTGTAGAGGCA
GGGTTTTGCCATGTTGCCCAGGCTGGTCTTGAAGTCTGAGCTCAAGTGATCTGCCTGCC
TCGGCCTCCCAAAGTGCTGGCATTACAGGCATGAGCCACCATGCCTGGCTGGGACATTAT
TCAAATTGAAGTGAGGACATGATGTTAAAAAGTTCTGGGCAAGTATTTACAAGTTAAAA
TACAGATGTAAGACTTGACTTGATCAAATGCCCAGCTCTGTAATTTACCTAAATTG

AGGTACAACATTGTGAAAATTTTCCTATCATTTTCCTCTAAAACCTCTGCAGGCATGGAGGC
TGTCGCTGAGATATAGCAGGGAACAATTTAACCCCTTGTTTTGCACCCACAAGATGAGC
ATTACCAAATTTCCCAACAGAGACATGCTGGGGCTGTGCTGTGCCTCCACCTGCCCTC
CACAGCCAGCTCCGCGTGTCTCAGTCTGTAAGTGATAGCATTCCACTTCCTGCCTGTACC
TCCCGGC

CNCGCGCGGCCGAGGNACACNNANAANAACCTTTTAAGGGGNGGAAAAACCCAANCCCCC
CGNCCNACCNCAGNGACNNGANGNATNTACNGGAAACAGGGCGCAGCCNAGGAAGGACA
GNNGAAGNCCNNACNGNGCAAGNCNAAANNNAAGGAAAAANNAGNCCCGCGANGAGNNNC
CNCANGCTTTNNNTNTGCGGGGACCAGNCAGGGGNCGNCCCCGACANAANCAGGGGCNCGC
CGNCGGNGGNAGAGNCACNNNGCAGGGGNGNGGAAGCNGCNCNCANCCANGGACCNNGG
CCGCNCNAGAACNAGNGGANCCCCCGGGCNGCAGGAANNCGANANCAAGCNGANGCANAC
CGNCGACCNGAGGGGGGGC

AGGTACTTTTTTTTTTTTTTTTTTTTGGNAGAGATGGGGCTTTACCATGTTGGCCAG
GCTGATCTCCAGCTCCTGACCTCAAGTGATCCACTCGCCTTGGCCTCCCAAATTGCTGGG
ATTACAGGCGTGAGCCACCGCACCCGGCCAGTCTTCATATTTATAAATAAAGTCTTGTG
GGAACACAGTCACATTTATTCAATTTTGTAAATAGCTGCCTTCAAGAGGTAGAGT
TGAAAGTCTTTAAGACAAAGATCAGGTGGCTTGCAAAACCTAAAACGTCTGGTCTTTTAC
CTAAAAGTTTGCCAACCCCAAAACAAGAATATATTCGATTGTAATCTTTACAAAGGTGT
TGGCTATATTTCAAGTGTGT

NCTATAGGGCNAATTGNAGCTCCCCGCGGTGGCGGCCGAGGACAAATTCAGTCCCAATAC
 TCAATACGTATTATAGATGACTATGAGTGCAAACCTTAGGATGNGATTNTCTGAATAATN
 GNTCTTTGTAGGATTTGGTTACATTATTTAAAATGAAAAAGATCTAGTTTGTAGTGAGC
 TCAGTAATGNTAATNGGTTAAGTTCATTGCGAATCTTGAGTTTTAGATAAGTAGTTATTT
 TTTTCAATATCACTTCTGTTTTAGTGATATTATATCAAGAAACAACGTATTCAAGAACC
 ATGGCTGACAGTGCCAGATATACTTAGGGATAAACATCAAAATGCAATTATAGTTGCTAT
 AACGTTAGATACTCGGAATCAAAATTTATTTGCANGCTGACTTGATAAACTAAATGAA

Sequence 864

TABLE 1
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TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAAGAGTCAGCAG
AAATGTGTGCTTTAAGCAGAGTCACAGGGGCTGGGGCTGAACTGAGTCATTTCTCAAAG
ATATCCCTGCCTGGGATGATGATGGCTCTAATTGAAGCTCTGGCATCATCTGGGGCTTTA
TGAGCCAAGGGAGATAAGAAGAGCCACAGCAAAAACCTTGGGTCTACAGTGCAGGCTGCA
ACCAAGGCAGCATTTGCTAGAATATTTGTGATTATGTGTTCAACCTACAACCT

Sequence 865

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCATATTAT
ACCTTTTATTGTTGTTATAATTATTATGGGGTATTTCTAATTAATATGATGTTGAAACC
TGTTTGGCACCTTCTGGAAGCTACCAAAAAAATGACACTCCATTGAAGTGCTTAAAAGCT
GTTCTCATAAGAATTCTACTGGCCTATTGTAAAAAAGAAAAAAGAAAAAGAAG
AAAGACACAAAGAAAATAATCTAAACACCAAAAACCTAAACACAATTCCAATCCTTTTCT
GTACCT

Sequence 866

ACTTAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACGGAAATCTGGACAGTG
CTGCACAGATTGATACATTAGCCTTTGCTTTTCTTTCCGGATAACCTTGTAACATAT
TGAAACCTTTAAGGATGCCAAGAATGCATTATCCACAAAAAACAGCAGACCAACATA
TAGAGTGTTTAAATAGCATTCTGGGCAAATCAAACCTTGTTGTTCTAGGACTCACA
TCTGTTTCAGTTTTCTCAGTTGTATATTGACCAAGTGTTCTTTATTGCAAAACATATA
CCCGATTTAGCAGTGTGAGCGTATTTTTCTTCTCATCCTGGAGCGTATTCAAGATCTTC
CCAATACAAGAAAATTAATAAAAAATTTATATATAGGCAGCAGCAAAAGAGCCATGTTCA
AAATAAGTCATTATGGGCTCAAATAGAAAGAAGACTTTTAAGTT

Sequence 867

CCGCGGTGGCGGCCGAGGTACATAACATGATATCAAGGAAATGCTTGAAACAACTTTCA
CAATAAAGTCAGAAAAAACTGTAAAAATTGTCTGCAATCCAAGAAAAGCAGTGCCCT
GTGTGTAGGGGGAAAGAGGGAAAGCACTTGCAAGTGTGACTTTATGTGGTCTTTCCCAAG
TATTGCTACGTTTTGACCTTTGGCCCACTGAACAGGTGAAATGCCCTTCACATAAGTTT
CAATCCCCAAGAACTAGCTGGAATGCAGGGGACTGTAGACACACTCCTGGACCAAATGG
CATCGACTCTCAGAATCCAAAATGGGCCCTGCCCTCATTCTGAGCTTACGGCCCCAAGCA
TATTCTAAACAAAGCTTTTTTAA

Sequence 868

CTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCAGGTACAGGATATCAC
CTGAATTATTAATGAATGCCAGGAAGTAATTTCTTCTCATTCTTCTAAACTACTGCC
TTTCAAAGNGCACACACACCGCGTNCACATACACTGCATTGCTTCCAGTATAAATTA
CATGCATGAGCACCTTTCTGGCTTTTAAGCCAATATAATGGGCTGCAAAATGAAGACACC
ANAGTGATGCATACAAATCTCACTGTATTAAGATGCAGGTTTTCTAATTGTACCT

Sequence 869

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTGGCGACGCGCGGGACAAAG
GGAAGCGAAGCCGGAGCTGCGGGCGCTTTTCTGCCGCGGTGTCTCAGATTATTCTTA
AGGAACTGAGAACTTAATCTTCCAAAATGTCAAAAAGACCATCTTATGCCCCACCTNCCA
CCCCAGCTCCTGCANCACAAATGCCAGCACACCCANGGTTTGTGGGATACAATCCATACA
GTCATNTNGCCTACAACAACTACAGGCTGGGAGGGAACCCGGGCACCAACAGCCGGGTCA
CGGCATCCTCTGGTATCACGATTCCAAAACCCCCAAAGCCACCAGATAAGCCGCTGATGC
CCTACATGAGGTACCT

Sequence 870

GACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGG
ACCCGGAAGTTTAAATTCCGCTCCCTCCACGAAAGAGTTGTAGTGAGTGAAAATAAATAT
TAAACACACGGAATGTATTTTCTGGCTGCAGCACCNGCCATCTTGCCTCGGNAGGAC
TCATTTTNAACAGCAGCTTCTTGAAGCCCCANAACGCATTCTGTGCTACGG

Sequence 871

CCGGGCACGGTACAGAGCCCAAGACAAAAGATAGGCCTGTGAGGATAACATCTGGTATAT
CTGACCCTTCCCAGCATGGCCAGGAGGCACAGCCAGGCCAGGGAGGGCATACTGGGTTTG

TABLE 1
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GCTTTGCCCTGCAGCTGTTGGCCTAGGTGCTGCGGTCATACATATGCCCTNAGGCCTTTC
CATGGCTACCTACCTAGAACCCAGATTCTTTTTTTTTTTTTGAGACGGAGTCTCGCTCTG
TCCCCCANGCTGGAGTGCAGNGGCGCCATNTNAGCTNACTTGCAAGCTNCGNCTTCCGGG
T

Sequence 872

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATTCGGGGTCATCCGCA
GAAATTCCTCATAGATGGTAACTCTGTCTACTCTCCGAGCCAGTGGCGAGAAGTTACACA
GGGAGTCCACCCCGGTGTGGTGCCTGCTTGNGGACAGACCTGAATGTTGAAACTTGACAG
TCAGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGCGCATCCTCAATA
TTCCTTTTGTCTCTGGNAATTGGTGGTGCCTGGCTGGGCTTTGCTCTGGGAATATGGT
AGGTTGGTGATGGTAGAAATTCAGGTACGAAGTGCTGGGTGCTGGAGCTGCTTGTGGTT
GATGAAGTATGACTCC

Sequence 873

ACTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCCGCCCGGGCAGGTACAATGCTCACT
GGGAACCAAAGTCAGGCATGGGGCTGGGCTTTAAGGAGCACAAACAAAAGGAGGGACTA
GAAACTTCAGAAAGGTATTGGTGGGGGATGTTGCGGGGGGACAGGGGACAGCGAGGATG
TGGGATCCCGAGATCGTCCAAATCCCTATGTGTAGACATATGTGTATAAAGGCCTTAAG
AGACTCAGGCTGATGGGGTATCTGTAATAAATCAAACATAATATAACAGCACGTCAAGTG
ATAAGGGGACTCTGAAAAACAAGCAGCAAAAGGAGCAGTATCAAACCTCCACAGAAATTC
ACAAACATCAAGACACCAAGAAAGCTGCATTNATTTAAATCAAGGTGACAGGCTGGGCTC
TGTAGCTCCAGCCTGTAATCCTAGCACTTTGGGAGGC

Sequence 874

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGGGCAGGTACTTTTTTTT
TTTTTTTTTTTTTTTTTTGGGATGGAGTCTCGCTCTGTACCCAGGCTGGAGTGCAATG
GCACAATCTTGGCTCACTGTAACTACACCTCCCGGGTTAAAGAGATTCTTCTGCCTCAN
CCTNCTGAGAAGCTGGGACTACCAGGGGATCCCGCCCCACCCCGGGTAGGTTTTTTGTAT
TTTTTAGNNAGAAGACAGGGTTTTCCNCCCATTATGGGCCAGGGCTTAGGTCTCGGAA
CCTCCTGGACCCTTGNGGATCCTGCCACCCTTGGGCCTNCCAAAAATGCTGGGGATTAT
AAGNGGGGAGCCACTGTGCCCGGGCCAACAATAAATTTTTTTAAGGGTAGTCAAACCT
AACAACAAAANTTTAAAGGTCAATCAGTAGTTCTAACTTTTTTTTTTT

Sequence 875

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAAGACTTTGTAA
ATGTGATTCAGGGCCCCCAGCACCCCTGTGTCTGCAGAGTGCCTTCAAACCTCAGCTGTT
CCGGCCGGTGCCAACCTGTGAATTCACCATATCCCAGAATCTGCTATTCCCCAAACC
ACTTCCAGTTTCCTTTCAGTAATCTTCTGAAGGAGCCAGGACAATAGGGCCTGTTGTT
TAGTGAATTTCTTTATTATTTTCAGCCTTTAAATGTAATTTCCATCTCTTGCAATGAAT
TTGTTTCCCTTTTTTTGCTTCATTTTGTTAAATTTTCAGGTATTTAGCTCCCCTTTCA
TATTATTTTAAATTTTTTAATTACCTGTTGTAGGGGTGTTCTCCAGAAGCAAAGAGCA
AAATTTTACTGTTGTGATGTACCT

Sequence 876

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGGGCAGGACGCGGGATTGA
TCAAAAGCTTTGTAACCACAGGAAAAATAAACTCTTCCATCCCTTAAAGAATAGAATAG
TTTGCCCTCTCATGGGAATTGGGCTGTATGTATATTGTTCTTCTCCTTAGAATTTAGA
GATACAAGAGTTCTACTTAGAACTTTTCATGGACACAATTTCCACAACCTTTAGATGCT
GATGTAGAGCTATTGGGAAAGAACTTCAAACCTCAGGAAGTTTGCAGAGAGCAGACAGCT
AGAGATAACTCGGGA

Sequence 877

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGGGCAGGTACAAGTCTTA
AACTGCTCTGCTCTTTAAACCAAATACATACACACATACAGATATAGTTAGATACAGA
TGTGTGTGCATATAAAAAATATGACACTCCTTAGTAAATATTCCTCTAGACCTGGGGTTC
ACACATCCCTCCTCCTGATCCGTGCTGGTGCCTACTCAGGCACTACTTGCAGATTTCTC

TABLE 1
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TTCTATGAGCTAAGGTTTTCTGAGCTAAGGTCAAGCGGTGACTTAGCAAGTTGAACGTG
TAATGAACCAAACCTGTTTTCCATGGAACCAATAATAATTAATCTAGAGTGAGCCATTT
GGCCTCCAGAAACAAAGAGATTTCCATCACAGAGTGTTGGTGAGGGGTCATGAGTAAGGC
GGGGGGGCAGTGAGAGCAAGCTGTTTTATTGTGAGAGTAGCAGGCAGGCTGAATGAGAAG
GGGTAGCTGTT

Sequence 878

CTACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGGTACCATTCC
GGGTCATCCGCAGAAATTCCTCATAGATGGCAACTCTGTCTACTCTCCGAGCCAGTGGCG
AGAAGTTACACAGGGAGTCCACCCCGGTGTGGGTGCCTGTTGGGGACAGACCTGAATGTT
GAACTTGACAGTCAGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGC
GCATCCTCAATATTCCTTTTGTTCCTCTGGTAATTGGTGGTGCCTGGCTGGGCTTTGTCC
TGGGAATATGGTAGGTTGGTGATGGTGAAATTCAGGTAGGAAGTGCCTGGGTGCCCCGCG
TACCTCGGCCGCTCTAGAACTAGTG

Sequence 879

CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTT
TTTTTGGGGAATAACAGGGGAGAGCAAATTTCTAAAAACTTGGGGTTTTATAGTAATTT
CTGATTTTCATGTTTAGAAAAAGAAATCACATTAAAAATATGCTTTTTTAAATTTTGAG
ATAGGATACACTATAATATTATTGTAGTCCAGAAAAATCTGTATACTATAATTCCTAGGGA
AAAAGAGAAAATTATTAGTGTCAAAATACCTATAATTCCCACAGTTACCATATACATTTT
TAAAAATTGTTTAAATACACAAACAATGATGATGCTGCTCCTACTAGAAATGACAGGAGCN
AGAGCTTTTACCTTTCTTTCAAAATGCCTTTAACCCTTTTCATTATTNCCAAGGTTCAAA
ATTTAAANATTCTTTTTTTT

Sequence 880

CNCTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATGGCGCAATCT
CAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAG
TAGCTGGGATTGCAGGCATGTGCCACCATGCTCGGCTAATTTTTTGTATTTTAGTAGAA
ACGGGGTTTTCGCCATGTTGGCCAGCTGGTCTCCAACCTCCTAACCTCAGGTGATCCACCCG
CCTCGGCCTCCCAAATGCATCTCTGGTCTTTAAATGCCCTTTGCTGTATATTCTATAAC
ATCAAGTCTCAGATCTGGTTTGACCTCAGTTGGCCTCTTAATAGTTTTCCCCTATGAACA
TTCTGGTCTCCCAGTAAGCCTGTAAGCAGCTGAGACTGGGAAACCATCTCTTATATCCCA
CATCGTCCCATG

Sequence 881

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCACACTGGTAAAGAGTGGCAAGGTAGC
CTTTGTAACCAGATATATCTGATCTCAAAATCAATTTTCTTAATTTAACCACGTCAGTC
AGTCAAATGCTAAGGCTCTTCAAGCTACACTTGGTTCTCCACCTCTAAAAGGTGAGAA
CTCAAGAGAGCTGGGTTCTTTGGGACCTTATCATATTTTTCCCCTCCCTAGGCCTTGATT
TCCCATTGGAAAAATAATCAGTGAGGGCTTTCTAGTTAAAAATGCCAGTTGAAGCCAGG
CTTGGTGGCATATACATGTAGTTCAGTTACTCAGGAGGCTGAAGTGGGGAGGATCGCTT
GAGCCAGGAGTCCAGTCCAGGCAACATTGCAAGATCTCATCTCTAAAACTAAAAAATG
GACCAG

Sequence 882

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTAATGAATTGAC
AAATGGAAGAAAATTTAAGGAGAGTAGCCTAGAGAACTCATTCTAGAACTAAATAACTT
AAGTCAAAAATTATTTCTATATTGCCTCAAGCCCTGCAGATAGCTTTGCTATGTTTGTG
TATTTGCACATTGCACTCCAGCCTGGGCGACAGAGACTCTGTCTCAAAAAATAAATGGA
ACAATCACAACAGAAACATTCCCTTATTCACTGAACATTTCAAACCCTGAAAATGTGTAA
TGAGAAATGACAAATTTTAAAAGTTTAATTAATAAGAACAAAAATGTCTATTATG
AATAGACCAATTCTCAATTGGTAGAGGAACTTTGAAGTGGAAAGGAACCCTAAAGAAATC
TCCTGTCTACCCCTGTTATTACAGATTAGAACCCGAAAGTCCAG

Sequence 883

CCGCGGTGGCGGCCGCCCGGGCAGGTACTATAATTATAATGATTTTCAGATAGAACATGCA

TABLE 1
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ATTAGCCTTTTGAATCCAACCTTCTGTGCAAAATTTTAGTATCAGAAAATACGAGATTG
CAGGGGGAAACATCAGTAACTACCATTAAATGTCAATGCCAGTTTTGACTTTTGTAGC
CTGACACTCCCAAACAGTTGTAGAATCCGATAGATGACTGATGGCAAAGATTGTGAACA
TGTGGAAGAAAATCAGTGGGATTCGGTGCTGATGAATAGGTTGCCTTCAGAGTATTATTG
ACAGACAGCTTGTGGAACATAATCTTTATTTTATGATGTTGTGGGAATTAACACATCAATG
GTGGTTATGGGAACCTACCAATGGGTTCTACAAT

Sequence 884

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATTCTAAATTATAAG
AAAATATACATTTGCACTTATTAATATAGAAATTCATTTTGTGTATATTTAACATAGCTT
TTAACTATTTTACATTAGCTACTTTTATTATGGTTTCTTGAACCTCTGAAAAAATTAG
AAATGTATTAACCTTATCAGTAACATAAAAACTTATTTTGTTCACCTAACGAATCTGC
GTTTGTAAAAATAAATTTAATATAGAATATATTTTAAATTAATATTTGAATATAAAAT
AGCTCTAAGAAAGAAGCAAATTATCACTGAACATATTTCTTATTATTTCTGGCTTTGAAT
TAATACGTAACCTTAAATTGGCTTAAATGATCCAGAATATTGGAGGAATATGATACTTTCA
CATAATATACTATGAACCTGTTCAATAACTCTGGATTGGCTACCTAACCTTCTGNTTTA
ATG

Sequence 885

CTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAGTCACACCCAG
CCAGTCAATAACTGAGAAATCAAAATAAAATAAATTTCAAAGAATTACATAAATACAG
GGCCTTTTGAGATTTTGGCAATTGTAAACAAAAACGAATGGTTTTACAATTCAGTGTA
ATTCTACGAATATTTATTTGGCACCCATGTTAGGCACTGAGGCTACACAGCAGTGAAATA
GGCCTAGTTGTTCTCACTAGAGAACATAGTTGGTTAATGTAGCTGCACTGAATTGTAAG
CTGTTTGAAGATAATATACCTGAGGCTTTTTAAAGTATACTATTACTATAAGGAAGTA
AAATTATTTTATACTTATAAATTTTGTTTGGATTATTCACTGAATTTGGAGTGTTGAG
AATTTTATGGGCGGTTGGGGACAAGGAAGAGGTATAATGCTATTTTTTTTCTTTTCTTT
TTT

Sequence 886

CTACTATAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTACTTTTTTTT
TTTTTTTTTTTTTAAATTTCCACCGGTGCCGAGGCCTCAGTGGAGCCTGGCTGGCGGCT
TGTTAGAGCCTGCAGCCTACCTGTCCTGCATAGGAATGAAGCCGGGAGGAGTTACATGAT
ATGCCCTCGTTGCAGGCCGGGGACACAGCTACCGCATTGAGAGACCAGGAAACAGAGCAA
AAGCTGTTCTCANAGTGCGGCTGAGCGAGGAGCTACAGGGGAATGGNGGGGGCCAAGCTG
CATGGAAGATTGTCCCATTAACCTGGCTTTTTACCAGGCTGGTCTNTCCCTAACCCCTA
AGAATCACACCCTGCATCCAAACGGCAGCAACCCCAAAA

Sequence 887

CNCTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTT
TTTTTTTTTTTTTAAAGCTGGGATATCTTACAGAGGAAGGAAAAATTAACCTTTTTTACTTT
CTTTCTCACTTTTTAAATCAGCCAAAGTCAAAGCCCGTTTGCCAACCTGCATGTCCATGC
CTGTAAGCCCTTCTNTTGGCCAAGGAAGAAAGGAAGAAAAAGAAACCCAGGGGCC
TGTATCCCTGATTAAACACAGCACAGCACTCCAGGCAGACATGCCCGNGGCGGCTCCT
TTGCACCATTTGACCTCAGGCCAGACACCTCAGCGCCAACAATGGGACCTCGGCCTTCGG
CTAGGTTTGCCCCAGGCTGGGCAGGAAACAGCTCGGCCGCTNTAGAACTAGGTG

Sequence 888

CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGAGACATTGTGGCTAGCCAACCACA
TGGTCAGCCTCAAAGTTGAGAGGCTCAGTAACCCTCCTATCCCTAGAGAATTCCAAAGTG
TGGATGTAATTTAACCTAGGAAAGCCATTGGTGACTATCTGTGATCCTCTGGAAAGTATG
CTATGTTGGGGTATATCTTTGCATCCAAAGCCAGAGGGGAACCACAATGGCCTAGTAAAA
CCGGTGGGTCTCAAATGCCACTTAAAGCCTCTGGCCTNTTGAANTTTGACCCATAGTG
GGCCGTTGAGCTTGATTAGAGCCGGGAAAGAAAGAAATATTGNCATTTTTTTNTTGA
AAAAAAATTT

Sequence 889

TABLE 1

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CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGGATCTATGCTGC
TATGGGTGGAGAATCGACATCCTTTGAAACTGGCCACAGGCAGAGCTAAGAGGATGACTA
AAAGGTCCCTTGGGTGGGTGCTAATGAGCAGGGGCCAGGAAAACCTCTGTCTTCCCGGA
GAGCCCTCTTGCATGAGTTTCGGCTTTGCCAAGATTCCAGGGACTTGAGGACAGCTATTG
AGTTATGGTTACGTGACTGCCACATTGGGGCTTGGAGGCATCTGGCAGATGGTTGGGAAT
GGGCTGGCACCACACTAATTAGGCCACGATGATCCAGTTTGACTCAGGGAAACCCAGAAG
TCATAGTNCTCTTTGCAGAATGACACAAGGATGTCAACATGCTTTGNTTGTGTACCTCGG
CCCGCTCTAGAACTAAGTGGGATCC

Sequence 890

CCGCGGTGGCGGCCGAGGTGCATATATATATACACACACATATATATATTTATGTATC
TTTTAAACATATAATTACTCTCTTTAATTCATTTGGACTTTTCATCTAAACTTGCTCTGT
TTGCACAGGTCTGTTAGGGTAAGATATGTTCTACCTTGAGAAATGTTGTGAATATCTAG
CGAAACACCAAAACATCCTCAGCTGACTAATGTGGTATCAGACTTTCTGGTTGCAAGGTAG
GGGTGAATAAGGCAGGATGGGGTGCGGGGGTGGTGCTGGAAGAAGACATGGCATCAGGTT
GGGTTTTGCAGGATACTGAAATTGTCTAGGGGCCTTGGCTGTGCAAAGAGCCTTCCGTC

Sequence 891

ACTTAGGGCAATTGGAGCTCCCCGCGGTGGCGGCCGCGCGGGCAGGTACGCGGGATTTCT
CAGATAGTTATGCGCAGCTCCAGGCACAGATTCTGTGCTGGGTGCAGGCAGGACCTGGA
GGGCGTCCCTCAAGTGTTGATCTGCAGGGACTGTCTTGATCTTCCAGCAGTGTCATTGTG
GGCAGTGACCTGAGCTTTCTGAGCCTATTTCCGCATCTGTAAAGTGCTATCCACTTCCA
CCTCCTGGGCTGTCGTGCAGATGTAGGAAGGAATTGCACTCACACACTCAGCATGAGACA
GGCGCTCAGTAAAAGCCCGTCCAGGGGATATGAGATCAGTGAGGGATAGGAAAGCAAGGG
TGGGTAGAAACAGCAAAACCCCTTTCCCA

Sequence 892

CTACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGNCAGGTACCAAGCATTG
GACACACAAAAATACAGGCAGCTTCTCCCTCAAGGAGGTCACAGGTGGGTGTGTCCATA
GCAAAGCTGGGAGGAAGTTGTATGAAGGAGCCTGAAGACAATGGGGAGCTAGGGGAAAGT
TCTGAGTAGAAAGGAACATGTGGACAAAGTTTGAATGATGAAGACTGATTAGGAAGTT
CATATTATGAAGCATAATTCAAGCTTTCTCTACGATGTTCAAATCCCATCTCTCCTACTT
ACTAGANAGGTGACATTGGGCCAAGTTACTTATCTCCTCTGCTCCTGTTTATTTGTGTTG
AAAAACAGGGACCTCTCTCACAGTGTGATTNTGAAGACTGGACAAGAAAATGGGAGGTTT
TG

Sequence 893

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACAGTTTGGAAGTTT
AGGCAAAAGTCATTTCTTCCCTATATTTTGTATGCTTATCTCCTGTCTCTTCTGTTTT
ACAGATTAGCAATAAACTCCTTAAACCCAAAAGGTTTGGGCTTCTGTTCCCTTTCATTG
CAGTCAGACATGGAGTTAGTGGTAGAAGAAACAGAAGGGTAACCTGCATGGTGACAGCT
ACTGAGGGGATGGATAGGAAAGCAGGCTGAGTCCCTGGGGCCAGTGGTTACCAAAGCCAA
GGAGAGGGCAAGGGGAGCCCAGTGGGCCTGG

Sequence 894

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTACATCACCTGCTGA
GGGACATCCAGGACAAGGTCACCACACTCTACAAAGGCAGTCAACTACACGACACATTCC
GCTTCTGCCTGGTCACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGT
TCTCCTCCAATTTGGACCCAGCCTGGTGGAGCAAGTCCTTCTAGATAAGACCCTGAATG
CCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGG
AGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTNTACCTGAATTTCA
CCATCACCACCTACCATATTCCCAGGACAAAGCCAGCCAGGGCACCAACCAATTACCA
AGGAACAAAAGGAATATTGAGGGATGCGCTCAACCAACTNTT

Sequence 895

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGGAGTAGTCTAAAACAA

TABLE 1
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GTGACTTTACTACTTATTCTTCTGCATGTCCTTACCAGCTTCTTACCTTCTTCAGGTTGA
GCATGAGATCAGCTTCACAGGGGATGGGGTCCTTAAGGGTTTTTTTCCATACTAGTTTTCA
GCCTTAACAATGAGTTTTCAACCCTTAAACATGAAAAATAAATAGTGCAGAAAGAGGGGAG
GATGGTAGAAATGCTTTAAAATTACCTTTTGTAATTTTACTTTGTTTATGTTTTAATTG
TGCTTGCTTATCAGGGAAGTCTACAAACAAAGAACTCCACGGCTTCTTCAAGTCTTCC
AAGGGAACAGGGTCCCCCTGGTTCCTAAAAATCAATGGGAAGTAGGTTTTTGGTAACCAT
CTACTGGTCAANGGNAACCATTTCTACCTGGCGGTTTATTACACCTTTGCTAGGCTTCT
TTTTCTTTTTCATTTTTAAAAATAATTTTT

Sequence 896

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGTTCATATCCCAGTTCTA
GAATCAGTTCATTTTCTAAGGAGTCCTGGTTCCTTTTATTGGAAACCAAAATCTGGGCAC
CAGGTGTGCTCCCATTCTAGTCGTTTTCTGACCACATAACTGCTAACAAAGATGCTTCAC
TCTGGCTACACTGATGTGAACTTTGAACTTTAGCAGAAGAGCTCAGCTCTAGAGAACAAT
GAGCTCCTACATTACCTTTTTTCTCAAAGAATAAGTAAGTCTAAGCAGAAAAAAATAT
GCAAAGAATTTTCAGTATGAATGAAATAAGACAAACCATCAGGCTTGCTGTATTGTAAC
CAACACAATATAGTTATAACAGATCTGTAGAAGGGATCCTTAGAATAAGAGAGGCATTTG
TCGGGGGGTCATCAGGGAGAATACTGGATAGNATCTT

Sequence 897

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTT
TTTTTTCTTCATGGCTACATCTGAACAGCTACTGAGGGATATATATGCCAACTTTGGGA
GTTGCACAGCTTTTTTGAGGCCATTTNTAANATGACTAGGGACTGTAATTTCTNNTAAT
TTGGAATAGCCACAAGTTGTTGTAGCCAAGGTTTGNNGNGNGTTTTAATACAATTCCTAA
AATTTTAGTAGGCTTCTCATCTGTANATAGATTTGAAGGGGNGGGGTTGCCCTCCACAC
CTGTGGGGTGTTTNTCGTAAGGNGGGACCAGAGACTTAGGA

Sequence 898

CCGCGNGGCGGCCNAGGTACACCAAATGGATTACAAGCAGCATCCAGCAGAAGACAGAC
CCCCAACCCCTGCCACCAAGGGCTCACACTCTACAAAACCCTGAGGGCCTAGAAATCTGT
AAATGCATCGNCAAGCACTGGGGCTGATTTGCAGTAATTCTCTAAGCAAGGCAAACATGA
TCTAGCTTTGAAGGCAGCATGAAGGCAGCGGTTGGNGAGAACAATCTNTCCTTAAGAGA
AGAAGAAACCTGGGGCGGANGGAGTTTTCCCCGG

Sequence 899

AGCTCCCCGCGGTGGCGGCCGAGGTACATGTTANGGTCTTGAGTTAATTGCTCTGTGGCT
GTGGATTTTTATTTGATGTTCTGATCTCTTCCCTCCAGTTTGATAAATTAGTGTAGAAAG
TGGAAGAAAAACATGCCGGCGCAGCCTGTGCGCTTTGTGAGGTTAACAGAATGGAGTCCT
GCTCTGGCATCAGTCAGTGCTGTTGTCCGAACCCTCTGTGGCTCCTTCCCTCCCTCCCTGG
GGCCAGAGCTGCAGACGCTAGAGGGGTA

Sequence 900

GCTNCACGCGGTGGCGGCCGCGGGCAGGTACCCTAAATGTTAACTGAGGGATGAGT
GAAACAATATCAGGATTAATAAATAAACACATTCTTGAATTCCATCACTTAATAGAAGTG
GCCATTTGAATGCTGGCAGGTNGGAAGAAAAGAGGAGGACAAAGAACCCCAAAAGTTGG
CATCATAACTACTGCCACAAG

Sequence 901

ATAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTT
TGATTTTTAGTAGAGATGGGGTTTACCGTGTTAGCCAGGATGGTCTCGATCTCCTGAC
CTTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCG
CCTGGCCTTTCCAGGGTATTCTTTAACGTGGTCTTATTTGCCTTTTTGAATTTAAGAAA
ATCTATCAGCATCATATACCACCACTGGAATATAAATTTGAAAGAGAGTCCTGCAGATTA
TATACATGAATCTACTTAGGCCTAATAACCAAGCAGTCCTCAGTGGCAGATCAATGAAAA
GTGAAACTAAAGGCAAGTGAAGGGTAGGAGAGATTGGCCAGT

Sequence 902

GGCAGGTACCCACCTCCTCGGTACCCACAGAGCCACCAAGATTCCATGTCCCAGAGCT

TABLE 1

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TCCCATAGCAGACCTGAAAAGTCCATGACCTGAGCTTTGGCCATGGTAGTGGAGTGGAAAC
AGGAAATAGTCCAGCAGAGGAGTGTGGGGGAAGGGGGCAGGAGAGGCACAAGAATAAGGG
AGACCTGGACTCTGCCTTTTTGGGAAAAGGAACCAAGCTCATAGCAATTTGGCTGATNAC
ACAATCAGATTTTTCCAGGTTAAGCTTCCTTTCTG

Sequence 903

CCGCGGTGGCGGCGAGGTACCATCTACTGAATGCCAGTTTTGATCTATTTCTAAATGG
AGCAAACCAATTCCATCTCCTAGAGCTGGAGACTGTATCCAGGCAGTGTGTGGACAGAAC
GGACAATCTTTCTGCCAAGGGCCTATTTGAGTGGAGCACCCCCACACGGGTTAGACGGG
TCGGCACGGGGCTGGTGGGTGAGGAACTCAGGGGTGAGTGAAGCTGCAGACCCTCATT
GGGGAACGCTCTCAGCACAATGCTCTTACAACTACAGGGTGAAGTCCAAAATGGAGTTCA
AGGAAAAAAGGCTAATGAGAAATAAAATCTGAAAAATAACTTAAAAAGTTTTGCT

Sequence 904

CCGGGCAGGTACGCGGGGGCCCTTTGGATACCTGCACTCCCCATCACCGCACTCCCCATC
GTGGCACTTCCCTTGTTCAGTTTTATGGAGTGTGCGTCTGGCTCCCCAACTAGACTTGA
ACCGCTTGGGTGCATAACTCGGGACTTGACCATTGCGTCTCCCTACGGCCAGCTCAGCC
TCCGCACACAGGGACCTGCAGAGAGTGGATGTAGCCACTGCCCCAGCGTCCCTGGGCTCT
GAAGAGAAGCCATTGCCCTTCAAGAGCCACCCTCATTTCTGGGCACTGGTTTGGAAAAA
ACGAAGAAAAAGAGACACCCAGCTCACCTCCA

Sequence 905

CTCCACCGCGGTGGCGGCCGCCCCGGGCAGGTACGCNNGGGCAACTCATTCATGATATTGGG
AGAAAAGCAAAGCAAAAACCTGCAACAAATCTCAAACCCTTTCTGCAGCAGCAGATGGCA
AACAGTGATCAGAGGAGAAGGACCCTTCCAGCATTAGAAGATTTCCAAAGGCTGTTCCAG
TAGGGGCTGTGGGCTTCTGGGAGCCCAGATGCCCCCTGATGGTATATTTGAGTTTGTGAG
GTGGAGGCCAGGTGGCAAGANACTGCNNGCCAATGTCAATGAAAAGCCTGGGAGGAAAAA
GAGATTTCTGGGA

Sequence 906

AGGTACTTTGCTAACCAGCATTTTGGCTGTGTTATTGGCAGTTTTCAAATTTGAATTCTC
TTGCCATCTTTTTGAGAGTGCATAGACATTTAATTTTAAGAAATTTATAGAATTGGACTT
TTTTGTCTCTATACATTTGTAGGTCAGATGCACATTTGTTTCTGTTTCATCTTTCTTTA
AGAGCAAAAATGTAAAGTTTTGTATGTAGAGGATAATTGTATGATGATGATAAACTAATT
AGGTATTACAGTTTTCTAACGACAGAAAATTTGTAATAATTAGGTAACCTGGTTTATATTA
AAATATTTGATACATAGGCCGGGCATGGTGACTCATGCCTGTAATCCAGCACTTTGAGA
GGC

Sequence 907

GGCAGGTACCACACCCATCTTACCCTCTTCCCTCTAGGTTCTGACATTGAGCTATCTTGG
TGGGAGGCTGGGGAGCACTATTGGGGATGAGGGTAAGGTGGAGTTTTATAAGCTCTCCA
GGTGACTCAGAGACCACCTCATTCCACCTGGTCACAAATCCCTGAATGGGAAACAGGTA
CTTTTTTTTTTTTTTTTTTTTTTGCAGAAGATTGTAAATTTATTGTATAAGTATTGCA
GCTTTTCANAATGTCATCATTGCCACTAATGATTACTGATACACAACAAGCAGTTTCTTC
AGGCCTGTGGATTGGCATC

Sequence 908

AGGTACTTCCCTGAGCAGTGAAGTGGATGCCAGACCAATGGCCAGTGCTAATATCAAT
GCAATGATCCCAATGACGATGATTGGA:AAAACCTTCAATGGCAGCAGTGACAGGATCTGT
GCAGCAACAGCATCTGCATCTGGTGCAACAGGACTTATTTCAAATCATCAAGGCCAAAA
AGCGATCGGAATGAGAAGGGGGCTTCAACAGCAGGCGGATCATTTTCCCCCATGGTGACT
ATTTCAGGACCTCTGACATCCGGCTCCGCCTCCACCTCTACCTCATAATTCCCGAGTCCC
AAAAATGTAGATGGCACCACGGAAGAGATAGTAGGCCACAGTGTTACTGGCTTCCCATTA

Sequence 909

AGGTACAGCAAATTAACCCCAATAACAGGAGGAGGAAAACACCTAATTAATATAAAAAATT
TCAAGGATATGTTAAACAAACAAACAATTACAAGAACTCCTGTCAAGTTAAACAGAGAG
AGAGAGAGACAGGGAGAACCCTAACAGGAAAGAGAAAAAGATATACAAGCTATCCCGCA

GAAATTAAAAAGAGACTAAGAATATTACAAACAACCTTTATTTTCATTTAGATGAAATGGAC
AAATTTATTTTAAAAACACAATTCGCCAAAATTGACAGAAGTGGAAGTAGAAAATCTATTT
CTGTATTTATTTAAAGATACTGAATCTATAATTAAAAATATCTTCACACAGAAAATTACAG
TTTCAAATG

AGGTACGATCTGAAGAAATGAAAGGCATTGAACCTTGGTGGGTAAATTGGGTCTTTTCCA
GCAAAGGTATAAATCCTTAAAAGCCAAGATCATATTGTTTGATTTCTCTGGGCTCTCTGC
TGGATACAGTGCCAAGTCCATAACTGTATACCCCATGGACACTCTATGTTAAATGGAGAT
TAATGTGTAAGAGGTGTTTTTTTTTTGTTTTGTTTTGTTTTTAATTTGGAAAAGAAGC
TTAAAGACCACAATGGGTGTGGCATTGGCTCGACCCACAGATCTGCTTAGTCTCAGACAG
GCACITTTGAACCAAGTCTTTTAAAAATGCGTCGACACAAC

AGGTACAGATCACTAATGGCTTGTCTTTTCTCCTAACTAATGTAAAATTCCTAATAATTCA
TAACTTGTATGAGGACAACAGTTGTGTGAATCTACCCTGGTCCTTCTGATNATTTTTAAT
TTTTTNATTTTTTTTTTTTTGGGGACAGAGTCGTGCTGTTATCGCCCGGGCTGGAGTGCA
GTGGCATGATCTCGGCTCACTGCAACCTCCACCTCCCAGGTTCCAGCAACTCTCTGCGCT
CAGCTTCCCGAGTAGCTGGAATTACTGGTGCCCACTACCACACCCGGCTAATTTTTTGTA
TTTTTAGTAGAGATGGGGTTTACCATTGTGGCCAGGCTGGTCTTGGACTC

AGGTACAAATTGTCGTTTTTATTCTCTTATTGGGATATCATTTTAAAACTTTATTGGG
TTTTTATTGTTGTTGTTTGATCCCTAACCCCTACAAAGAGCCTTCCTATTCCCCTCGCTGT
TGGAGCAAACCATTATACCTTACTTCCAGCAAGCAAAGTGCTTTGACTTCTTGCTTCAGT
CATCAGCCAGCAAGAGGGAACAAAACCTGTTCTTTGCATTTTGCCGCTGAGATATGGCAT
TGCACCTGCTTATA

TGCCAGNTCAAATNACAACCCCCCAACCCCCCCCCCCCCCCCCCAAAACAGACAAGGA
CACAGNTCACCANACAATGGATGTNCAGGNANTNGATATCAGCAGATATNTTAGNCCTNT
AGATAGGCTAATTTNANTNAGCAAAGGAAAGAGGAGGTANCATTAGNCAGATGGGNTATT
NACCTCTGAATTAGATGGCACTTACCCANCTTCTGGNACAGNCCTGCTGGNGGCGTCTAG
ACTAGTCTAGTCCCGGCTGANGATCGATTAACATCATCCGCGACCTCAGGGGGGGCCGGAC
CCACTTTTGCTTA

CGAGGTACGCGGGACACTGGTGGGGGAGAGTCCGACGCGCCTGGCTAGGAGCGCCGACCG
CAGGCGCCTCTACGGACCTTACTAGAAAAATGAAACCTGATGAAACTCCTATGTTTGACCC
AAGTCTACTCAAAGAAGTGGACTGGAGTCAGAATACAGCTACATTTTCTCCGAGCCATTTT
CCCAACACATCCTGAGAGAAGGCTTGGTTTTGAGGCTTCATCGAGAAAGGGGAATGGGA
ATGGCTGCTTAACGGCATGTCTTTTTTTTTTTGAGACGGAGTCTTGCTCTGT

CGCCCCGGGCAGGTACGCGGGGACTTGACTTAAACTCTGGGGCCCGGGAGGCCGCCGTTT
TCTCCCCGCTTGCCGGGGTGGTCTCTTCCCTTTGTCGGACCAAAGAAGTAAACACTGTG
TGGAGAGGGACTGCGTGTGGAGGGGAAATGGGAATGTACCT

CCCCGCGTCCGCTCTCTGTGCGGGGTCCCCTCCATCTCGTGCTGCTGAAGGCCGCGAGGG
CGGCGGCGATGGCGGAGGCGGCGCTGTTGCTGCTGCCTGAGGCGGCGGCGGAGCGGGACG
CTAGGGAAAAGCTGGCTCTCTGGGATCGGAGACCGGACACGACGGCGCCGCTGACCGACA
GGCAGACGGACTCGGTATTGGAGCTGAAGGCGGCGGCAGAGAACTTGCCGGTGCCAGCTG
AGCTTCCAATTGAAGACTTGTGCAGTTTAAATCCCAGTCACTGCCATTGAAGTCACTT
CAGTAGTGCTGAATCTACAGAAGACATTCTTTGAAGGGCTTCACTTCTTAGGAATGG
AAGAAGAAAAGATTGAAACCGCACAGCAGTTTTTCTCATGGTTTGAAAGCTGAAACT
CAGATGGATCAAGATGAAGGAACTAAATATAGGAGCAGTGTGATGCTATATTGAATGATG
TAAACAGTGCTCTTCAGCATCTGGAGTC

TABLE 1
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Sequence 917

GGCTGTGGCCCAAGAAACGCAGGGACCGCTCTCTCCCCGGGCTTTCGAAATCTTCACAGA
CAATAAAACCTATGTCTTTAAGGCCAAGGATGAGAAGAATGCAGAAGAATGGCTCCAGTG
CATCAACGTGGCAGTTGCCAAGCCAAAGAAAGGGAAAGTAGAGAAGTAACCATATCT
GTAGGGAATTTATAAGTCAGCCATGACAATTATACACCACAGGCATTGTATTATCATTGC
CAATGTCAAGAAAAAGAGCTAAATTTACCAAGCCATGGTTGGNTTTTTACTAAATACCAT
GGGAATTTGTTGGTCCTTTAAGAAGAAGGGCCTTAAATGGCAGGGATTTCTTAGTNAAA
TGNCAATACTCTAACAGCTTTAGTATTGACTTTAGAATATATCTGATGCCACAAAAATT
AAATAAAAGGGNTTNGAGGAGGTTTGCNNAATAAGTGNNGGGCCCGGAGGGGAA

Sequence 918

AGTCNCCACGCGTCCGCGGACGCGTGGGCGAGTGCCAGTGACCCTTTACGGGGGTAGCT
TTTACTCCGCACTCTCAGCCCCTGCCTCACCCTCCCTCAAGGCCCGGATTGACCATTTCT
CTGCTCCAGCACTCCATCCCTGGCTGCCACCTGCTTGGGAGAGCACAGACGGCATTGGCA
GTGATCCCTTCTTCCATTGTTCTGCCCTCTCAGAAAAGGAAGATAGAGCAGGCTGAACAT
GTCCCAGACAGTAACTTTGGTGTAAATGCTTCCTGTTTTCTGCCACAAGCCCTTTGGTC
TTACCCACTACCTCAGAGCACACTGCTAAGAAAATGAAAGCCACCAATGAGCCCAGCCTG
ACACATATGGGACTGCTCGACAGGTCCACTGTCCACGAGCAGAAGCTGGTCACAAAGCT
TGGGAAAT

Sequence 919

GGGAGTCGACCACGCGTCCGCGGACGCGTGGGCGAGTGCCAGTGACCCTTTACGGGGG
TAGCTTTTACTCCGCACTCTCAGCCCCTGCCTCACCCTCCCTCAAGGCCCGGATTGACC
ATTTCTGCTCCAGCACTCCATCCCTGGCTGCCACCTGCTTGGGAGAGCACAGACGGCAT
TGGCAGTGATCCCTTCTTCCATTGTTCTGCCCTCTCAGAAAAGGAAGATAGAGCAGGCTG
AACATGTCCAGACAGTAACTTTGGTGTAAATGCTTCCTGTTTTCTGCCACAAGCCCTT
TGGTCTTACCCACTACCTCAGAGCACACTGCTAAGAAAATGAAAGCCACCAATGAGCCCA
GCCTGACACATATGGACTGCTCGACAGGTNCACTGTCCACGAGCAGAAGCTTGTCAAA
AGCTTGGA

Sequence 920

AGTCGCCCCGCGTCCGCGGACGCGTGGGCGGACGCGTGGGCGGACGCGTGGGCGGACGCG
TGGGGGATGGATGACAGTCCACCAGAAAAAAGTTAGTGGAGCGGGGACAAGCAGGGTTGC
AGAGTGGAAGAAAAATGTTCTGTGAGAAGAACTGTCCAAAGAGTNTGAAGAGAAAAGG
GAACAGGGTGAATTTGANGCCCTACAAGAAAAACAGGAGACCATTCAACAGGAGACGCCC
AGGGAGCAGGTGGCTTTGTGGGCCTGATGTCCAAGAAAGAAGTNCTGGTGGTAAACAGAG
ACTTGTGGATTGCAAGCTACTGTTGTCTTTCTATTGAA

Sequence 921

TCGGAGTCGCCACGCGTCCGGCCAGGCGTGCCTGGAAATCCGCTTTCGCAGCGCCCCCTC
GTAGCCCGCCTCCGCCCCGAGAAGGCGTTCCCTGGACAGAGAAGCGGGCGCGGGGGCGG
GGCGCGTGGGGCCTTGCCGGAGAACCTGACTCTCCGCAGCAGCAGTGGAAGCCAGAGTGA
CGCGTTGTGTTGAACACCAGTTTTCTGGAGCGCTGTGTGTTCTCAACAGCTGAGCAGTCT
GTTTCTCCAATCAGTTTTCAAAGCCACTTCAACTGCACTGGCCCCTGTGGGTCACTGCTG
CACCGCCTTGCCCCATGTGGGTCCCTGAGGAGCGACCTGCCGGGGCCACCTGGCTGGACG
AAAAAGACACACTTTGGGACTTAAGCCGTGAGAAAAAACTTCATCAGTAAGAAACAAGT
CAATAGACAAGTAAAAGACTAGGAGAAAAATATGCATAAAACATAAAAAGTGACTTGGATT
CCTGATCTTGGAGTATTTAAAGAATTCTATAACTTANAAAAGGTTTCAAGTTTTTTNAA
ATGAGCAAAAANGTTTGGGTAA

Sequence 922

TCCGCAGGCTGGGGGATCCCAAAGGGTGCGCTCCAGCCCCCAACCCAGGCACTGGGACTC
TGGTGGCACCCTGGGTGGCAGGCAAGCCTTGAAATCAAGTGACGAGCCTTGGAAGGAG
GACCGGGAGAGTTATGGCATTATGAATGAAGAAGAGAAAGAGAATCACTCGGATGGGAA
AAGTTAACTGGATTGTTCCACCTGCATGGATCACCCGGGTAAGTGCAGTGGGACCGAGG
GGGCGAGGCTGCGGGCTGGGGGATGTGCCGGGTTTCTTGTGTTGCCACGAACCCAGAGA

TABLE 1
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GGGAGAGGAAGAAGATGGAAAGAAAAAGGAAAAAGGGAAGGAAAGTAAGAGGGGAGAGAG
GGGGAAAACTTGAGGATGAAAGAAGAGACAGAAGAAAGAAGACCTTGAGAGAGGGGA
GGAGAAAGGAAAGGAAGCNGGAAGGAGGAATTGGAAAGTGAAGGAAAGGGGGGAAACCAG
GCNGAGAAAGAAAAGAGAAAAGGGGGAAGGGAAGAAGAAAGGGGAAAAGNAAGGGGGGGN
GGTTGAAAATCAACNCGAAAAAAGAGG

Sequence 923

CNCGCGTCCGGCTGTGATGAATGAGGTCTAGGAAATAATTTGCATGTGTCTTGGGGGACA
CAACAGTAACNGAGAGGAAATACATTATTACAGCAACTTGCGACGTACTAATACCTGTCA
GTGTTGGCCCCCGTAAGGTATGTAAGGCACCTGNGANGTGCCAGTNAGTNCCTTGGTGN
AAGGCCAACATGTACTAGTTATGTAAGTATTGGTGTCTGCTTTAAAAAGGAGACCCAGA
CTTCACCTGTCTCTTTAAACATTTGAGAACAGTGTTACTCTGAGCAGTTGGGCCACCTT
CACCTTATCCGACAGCTGACTGTTGGATGTGTCCATTGTCGCCAGTTTGGCTGTTGCCCG
GACAGGACAGGACCTCCATTGGGCGCAGCAGCAGGTGGCAGGGGGTGTGGCTTGAGGGTG
GGTGGCAAGCGT

Sequence 924

CCCCGCGTCCGCACAGATCCTTGAGCTCCGCTGCAGGATAGTACAGTTTTACCGCAGAGG
GAATCTGGAACAGTGAATCATGTGTCTGCCCTGTGTATTGCAGTTTGTATTGCCACAAG
CTATATTTATACAGTGTCAACCCTTTTCTGTAGAATATACTAATAAATCTGTGCCAACT
CTACCTTCTCACTTTTACCTCTGACGTCATTCTTTTTTCTGAAAGAGGTAATAATTCTA
GTTTTGATAGACTCTGAGGATTATGTGAACAGGACATTTTTTCATTTGTGAATTAATGCT
ATACTGTCAAGGTACTTGCTTGTGTCTGAAGTCTAGTGCAGTTATGATTTTGTAGACCCA
TGTGAAATTTAATAAGATACGTTTTTTTCTTTCTTTGGTGTGGTAGTGCAGCAACAGT
TTGGTCTGCATTTGTTAGAAGTTTAACTCCTAACAA:CCCAAAGACCTATTTA

Sequence 925

GCGTCCGACCCCAAAGGGAGGGACCACATTGCACACACTGTAAGAAATGCACCTTCCGAG
GAAGGGGATGGGGGAGCCCGGACACCCAGAGCTCCCGAGTTGGGGGTGCCCGTCTGGAG
CGCCCCCGTCAGCCCCTGGCGGTGGGAGGTGAGAGCGAGTGGTTAAGTGCCTGATTACC
ACCACCCGCCCCCCCTTTGTCCAGCTGGGACACGGAATGGCCGCGGGCCTCCTCCCCCT
CCCCTCCAGCCTCTCCACCAGCCCCTCCAGTCAACCCTCATCGCCGTGCCCCCCCAGAGC
TAGAGAGATGGGGCCCCTGCGTGGCCCGAGGGGCAGAGCTGGGCGTCACTTCGAAGCGT
CCTGCCCTGCCGGGGCGCGGGGGTGGGCTCTGGGGAAGCCGGTGCGCCCCCCACGCCTNC
GCTGCCAGTGCCCTTACATTCTGGAGCGACCCCCCTCCCTGGTGCCTCCCAGCGAAGGGGG
ACCCGC

Sequence 926

AGACAGCTCAAGCCTTGCCACTTCGGGCTTCTCACTGCAGCTGGGCTTGGACTTCGGAGT
TTTGCCATTGCCAGTGGGACGTCTGAGACTTCTCCTTCAAGTACTTGGCAGATCACTCT
CTTAGCAGGTAGGTGCCGCAGACCCTGCGGGTTAAGAGGTGGGGTGGGGGGCAGTGCTTG
CCAAGGCCCTAACTGGGAGCGCTGGGTGAGGGGAACAACCCACTTTGGAGGGTTCTCTG
AGAGATAGATACACCCCATATCCTGGGCCCAGCTCGTGCACACAGCTGGAGGTCCAGAGA
CCCAGTCCCCTCTGCTCCGTGAGCCAAGTCCAAGAAGTTGAGCAGAGACCCTTCTGGGA
GCCTGGCGGGGTGCAGCGGCTCCCTGCGGGGCTGTACCCGCGCGGGCGCGTGCAAA
CGCCTCTGGCGCCTNTNTGCGCGGGAGGGAGATAAGCGTCTGAGCCAGGGAAAGCCGCC
GGGCTAAAACCCGCCTTTTCCGGGGGCCCC

Sequence 927

CGCGTCCGGTCAATACAAATGTCATTGTTTGGGACCCGTTTCTAAATACATCTGCTGCCT
ACATTCTGCTCACACATACGCTTGACAGCTTTGAGGCAGGAGAGGGTAGTTGTGCTTCCC
TAGGAAGAGTGTCTTCCAAAGTGTCTTCACTCTTTTGCCTGCTTGGTTTCTTCATT
GTTTCTTTGGACACAGATTCTGGAACAGAAATTATTCTTCATAGGCTTTATCATCATGG
GATTCTTCTTTTATATACTGATTACAAGACTGACACCTATCAAAGTATGATGTGAATCTG
ATTCTGACAGCTGTCACTGGAAGCGTCNGTGAATGTTCTTGGTAGCTGTGTGGTGGCCG
ATTTGGAATCCTCTCGATCTGCATGCTCTGTGTTGGACTAGTGTGGGGTCTCATCTC

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GGTCANGTGACTTTCTTTACTCCACTGGGAAACCTAAAGAATTTTTTCATGATGATTGGG
TGTATTCTGGGTCACTTTCTCTTGCCATAAGCTATNCTCATTCCAGTAGTTT

Sequence 928

CCACGCGTCCGGACGCTGCGTGGAAGCGGCGGAGCCGGAGGGAAGCAAAGGACCGTCTGC
GCTGCTGTCCCCGCCCGCGCTCTGCGCCCCTCGTCCCTGGCGGTGCTCCGAAGCTC
AGCCCTCTTGCTGCCCCGGAGCTGTCCCGGGCTAGCCGAGAAGAGAGCGGCCGCAAGT
TTGGGCGCGCGCAGGCGGGCGGGCCGCGGGCACTGGGCGCCTCGCTGGGGCGGGGGGAGGT
GGCTACCGCTCCCGGCTTGCGCTCCCGCGCGCACTTCGGCGATGGCTTTTTCCGCCGCGG
CGACGGCTGCGCCTCGGTCCCCGCGGCCCTCCCGCTTCTTCTCTCGGGACTCCTGCTACCT
NTGTGCCGCGCCTTCAACCTAAGACGTGGACAGTCCTGCCCGAGTACTCTGGCCCCGAGG
GGAAGTTA

Sequence 929

CGACGGCCANGGCGCCTCCGAGTTCCCCGCCAGGACTCGGAGGGCCAGGAGGGCGCGACC
TGGGTGGATATTTTTGTTGGACGGCGCAACTCTTGGGGTGGCCCCGGAGCGGCGGAAACC
GAGCGAGAGAACCAGGAGGCGCTGCGCAGAAGGAGGCCCGGGGGCTCCGAGGCGTTGAGG
GGCTCGATCTGCGTTCTGGGGTTGGCAGCCGAGAGGCCGCGGTCCCTGAGTGCCAGAGGT
GGTGGTGTGCTTATCTTCTGGAACCCCATGCAGCCAGATCCCAGGCCTAGCGGGGCTGG
GGCCTGCTGCCGATTCTGCCCTGCAGTCACAGTGCCCTGAGGGGGCAGGGGACGCGGT
GATGTACGCCTCCACTGAGTGCAAGGCGGAGGTGACGCCCTCCAGCATGGCAACCGCAC
CTTCAGCTACACCCTGNAGGGATCATACCAAGCAGGCCTTTGG

Sequence 930

CGTCCGCTTTNAGACCGGAAGACATTTAAAAGCCAGTTTACGTACANGAAGCATGGTTTT
AGATTAAGTGCCTGTTGGTACAGCTAGAAACATTGCAGCCCTATCGCTTATTTATCTTGC
ATGTTGCTCTGCTTTGCTATGAAAAATATCGTTTTATGATAAACTTGTGAATTTTAT
ATGTATTGGTTATACTCTTAGGGAAAAATAATAGAAATTAGAGTGAGAGAAAGTGCTATG
TATATTAGGCTTTTCAATTTTATAGATATAGGCTTAAGGGAGGGTGGAGGTTCTTTTTT
AAGTTGAATGACTACTTAAATTTGTTGATGTGAATTTAAGTTTAAAGATTATTATTAAT
TAACTCTTCTCTTTGCTTTGCAATTTACCTTCCAGATGTTCCAGCCTATCATTTTACTT
ATTCTCATTCTTGATTATTATTTTATCACTTTCTTACACAACAATATTTAACTTGNCTTC
CTTTTACACTGGTTTTTGGTAC

Sequence 931

CACGCGTCCGTGGAGTATGTGCCATCTGCCAAAGTGGAGGTGGTGGAGGAGCGCCAGGCC
ATCCCTCTAGACGAGAACGAGGGCATCTATGTGCAGGATGTCAAGACCGGAAAGGTGCGC
GCTGTGATTGGAAGCACCTACATGCTGACCCAGGACGAAGTCCTGTGGGAGAAAGAGCTG
CCTCCCGGGGTGGAGGAGCTGCTGAACAAGGGGCGAGGACCCTCTGGCAGACAGGGGTGAG
AAGGACACAGCTAAGAGCCTCCAGCCCTTGCGCCCCGGAACAAGACCCGTGTGGTCAAG
CTACCCGCGTGCCCCAC

Sequence 932

GGTTCGCCCACGCGTCCGCCCTGCTACCCTGGGAGAAGCCTCAGCTTTCTGGGCAGAGTT
TGTCTCCCTGTCAATTTATACTCTCAGGCTTTATACATTTACACAGTAAGTTCTCCCTCCT
GGAGGGTTAAAAGGAATAATTTCAACAGGGTGAAGGCCTGGCACGGTGGCTCACAACCTGT
AATCCAAGGACTTTGGGAGGCTGAGGTGGGTGGATCACCTGAGGTGAGGAATTTGAGACC
AGCCTGGCCAACCTTGGTGAAACCCTGTCTCTACTAAAAACAAAAATTAGCCAGGTGAGGT
GGCACACACCTATAGCCCCAGCTACTGGGGGAGGCTGAGGCAGGAGAATTGCTTGAACCT
GGGAGGCAGAGGTTACAGTGAGCTGAGATGGCACCACTGCACTCCAGCCTAGGTGACAAA
GCAGCAAGACGCATTCTNAAAAACAAACANCAACAACAACAAAAACGGGAAAAACA

Sequence 933

CNCGCGTCCGGTCCACTGTCATCTCCTGGGTTTTCTCTGCTCTTTTATTTGGTGATCCTG
GTTCTTTTGGCCGTTTACGTCATTGTGTGCACCTCAGCTGAAAGTTCGTGCTACTTCTGT
GGCCTCTCGTGGCTGGCGGCAGGTGGGGTGATGGTGCTGGCCTCGGCGCTGCTGTGTGTG
ATTGTGTCTGTTCTGACCAACGTGCTCGTGGGTGGAAACACCCCAAGGAAGAACCCCATG

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CATCCCAGCTCAAGGTGGTCAGAGCTAGACCTTCTTATTCTGTTGGGGACGGCGGGCCAC
GTCTTGAGCCTGGGCGCCAGCAGCTTCGTGGAGGAGGAGCACCAGACCTGGTACTTCCTT
GTGAACACCCTGTGTCTAGCTCTGAGCCAAGAAACCTACAGAACTACTTT

Sequence 934

TCGCCCCGCGTCCGGTTATTTTACCCAGAAGCCGGATAGAGAAAATATTACAGAGAAAAT
CACATATCACATGGGCTCGAAAGATGTAGAGGTTTTTGACAAATGAAGAACAACCATAAC
AGGTAGAGGGAACACCATGAACCAGGGCATGAAACTGAAAGTGCATAACATATTCTAGAG
AGAGAAGGGTGTGGGCATGAGTTAGGGCTGGAAAAACAGGTTGGAAACAGATAAGTAAGG
GTCTCAAATGCAATGTCAAAGAGCTTGCAGTTTATTTTCCAGGCAATGAGTAGGCAGCCA
AAAAAAAAAAGTAAGGATGTTTTTTTTTTTTTCCCATGGCATCATATTTAAGAGGATGG
ATTTAAATTGTGTGAGACCAAAGCATAGAGACTAGATAAGAGGGCGATCATTATTTCAA
AAGAAATAATGAAGATCCAATGAAGGAAGTGGGAAATTAATAAGGGGAAGAGAGGTA

Sequence 935

CCGTCCGGTTTTTTGTCTCAGAGTCTTCAGGCTGTACAGGAAATGTGGTGCCGGCATCT
GCTTCTGACGGAGTCTCACTCTGTCGCTCAGGCTGGAGTGCAGTGGCATGATCTCGGCTC
ACTGCAACGTCCGCCTCCTGGGTTCAAGCCATTCTTCTGCCTCAGCCTCCCGAGTAGGTG
GGACTACAGTGGCCATGTGTCTGAGATCTAACCAAGGGAACATGGGTGGAACATGATGTA
GCCACTTTGACACCACAAAACCTCCCATGGGTTCTCTCTCTTCTCTGTTGTAAGTGT
TGGATGGAGAAGATGCTGAGAAATAGTGGGAAGTCTAGGGGATGGAAGAACCAGGATT
CTGAATACTCCATTGGACCTTACGTTTTGGAATCAGGNATGATGCTGGCCTTCATAAAAT
GAGTTATGGAGAAAGTCCCTCTTTTTCTGGTGTGTTGGAACANGTTTTAGAAANGAATTT
GNTACCCAGCTTCNTCTTTGTACC

Sequence 936

CCGGTGAGCGCCCCGCGCTCAGCCGCCAGATCAACCTTAGCGCTGGGGCGCGGGCTGG
GGTCGCCAGGCGGTGCGTTCTGCCCGCGCGGGGCTGAGAGTTAGGGGCGCGGGCCGGATC
CGGGGCGGGGGTCCGCGCGCTAGCCGCCAGCAGCGCAGTCCGGGCGCGCCACCTGCACC
CTCCGCCCTGTTTCTGCACCCGTCTGGGTTCTTGTGCCGCCGCCGCAAGCCTTCCCGAG
CTCAGGGTGGTGAGCTGCGGAGACCCGTGATAATTGTTAACTAATTCAACAAACGGGAC
CCTTCTGTGTGCCAGAAACCGCAAGCAGTTGCTAACCCAGTGGGACAANGCGGATTGGAA
GAGCGGGAAGGTCTGGCCCAGAGCAAGTGTGACACTTCCCTCTTGACCATGAACTCT
NGGGTGTCTGCATTGCTGATGGC

Sequence 937

GTCCGCGGCGATGAGCTGTCCATGAAGGATGAGCTGCTTCAGTTCTACACCAGCGCTGCG
GAGGAGAGTGAGCCCGAGTCCGTTTGCTCAACCCCGTTGAAGAGGAATGAGTCGTCTCTC
TCAGTCCAGAATTACTTTTCAATTTGGATTCTCTTCAAAAGAAGCTGAAAGACCTTGAAGAG
GAGAATGTTGTACTTCGATCCGAGGCCAGCCAGCTGAAGACAGAGACCATCACCTATGAG
GAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAGGGATGCCAATGTCCAG
ATTGCTAGTATCTCAGAGGAACCTGGCCAAGAAGACGGAAGATGCTNTCCGCCAGCAATGA
GGAGATCACACA

Sequence 938

CCCGCGTCCGGAATTCCAGTTGTGGATGAAGGAAATGGTGTTATGACTGCCTCAAGGTTT
TGTAAGCAAGTCATAGGGAACCAAAAGAGGAATCTTGTTTTCTCAGAGGTCATGCCAACT
CCAACCTCCCGTTCCCTAACTGTCTCTGAGCCATAGACTAGTAATGGACTCTTCAAGCTC
TACCATTAGGTATCTTTTAAAGAAAGCTGGTTATTACTATTTATTCATTTTTTTCTCTTC
TGTGCAGTGCAAAAGATATGAAACATCGGCTAGGTTTCTGCTGCAAAAATCTGATTCCT
GTGAACACAATTCTTCCACACAAGAAGGACAAAGTGGTTATTTGCCAGAGAGTGAGCC
AAGAGGAAGTCAAGAAATGGGCTGAATCACTGGAAAACCTGATTAGTCATGGAATGTGGG
CTGGCAGCTTTCAAAGCTTTCTTGAAGTCTGAATATAGTGAGGAGGAATATTGACTTCTG
GATCAAGCTGTGNAAGAGTACAAGAAAATC

Sequence 939

CGTCCGGCCGGCGACGGCGGCAGTGGCGGCCCGGCTGCAGGAGCCCGACGGGGTCTCTG

TABLE 1
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CCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGCGGCGAGACATGAGGAGA
CCCCGCGACAGGGGCGAGCGGCGGCGGCTCGTGAGCCCCGGGATGGAGGAGAAATACGGCG
GGGACGTGCTGGCCGGCCCCGGCGGCGGCGGCGGCTTGGGCCGGTGGACGTACCCAGCG
CTCGATTACAAAATATATTGTGTTACTATGTTTCACTAAATTTTGAAGGCTGTGGGAC
TTTTCGAATCATATGATCTCCTAAAAGCTGTTACATTGTTTCAGTTTCATTTTTATATTA
AACTTGGGACTGCATTTTTATGTTTTGTTTCAAAGCCATTTCTTCTGGGAAAAC
ATTACCAAACACCAGATAATTGGATCACTAAAAATTCTGGTAGAAAAGAATTTAAAGAC
AAA

Sequence 940

TCCGAAAGNGTACTGCCATGANCCGAGATAGGAGACACATAAGAGGACAGCAGAAGCCCT
GGCCCTGGGGAGGCTTCTCGGAAGGCCTGGCTTACAGGCAGGCCACAGAAGGATATCGC
GGGCACCGTGACCCAAAGCAAGATAGTGGCTTCCCTTTTATATCCAATCTAATCCTGAT
TGGATGTCCCTGAGGCCCTGCTGGAAACAGCCATAGGAGAGGGCCCATGGCAGTAGGGG
AAAGAAGGAAGAAATTCCTGCAACAAAACCTTCAGCTAACTTTGATTTGTGTATTGTT
ACATAATAATTTAAAGGTACATAATGTGTAAAGAGTTTGGATAGAACCTCTCTTCATA
CTATGGTTTTTCGTAAAGGATCTGTTGTTGTTACGGATTCATTTTTCCCTCTATTTTTAT
AAAGAGCAGCAGAGTTGTCTTCTCAAACGGCTGCCAAGCTCTGCTTCTTGGGAAGAT

Sequence 941

CCCGGTCTGTGCGGGTGGGGCGCGGGCGGGCGGCGGCGGCGAGTGGCGCTNTCAGGTGATTGA
CTGGCCAGCTGCCTGAAGGAGCGCCAGGTCTCTTCTGCTGGCAGGTGGCGAAGCCCATTG
GGGCGGCGGTGCAGACCCGCGGCGGCGGCGGCTGCGGCGGTCTGGCTCGGGAGGCGTTCTCTGG
GGCCAAGGCCATGGCCCCGCGGCTGCAGCTGGAGAAGGCGGCGCTGGCGCTGGGCGGAGAC
GGTGCGGCCCCGAGGAGGTGTCNCAGGAGCACATCGAGACCGCTTACCGCATCTGGCTGGA
GCCCTGCATTGCGGCGGTTGTGCAGACGAAACTGCAAAGGAAATCCGAATTGCTTGGTTG
G

Sequence 942

CACCCACCCAGATGCCGCTGGCACCAAGCGCAGCCGCCAGCTGCCGCACTTTCCACTT
GTATTGATCACCTATNANNCCCGCGCANAACGGCTACGNCCGAGCGGACCGCGGCCAGCG
CGCCAGCCCTTGGCACNCCCTNGGAGCAGAAAGGGCTCCGGGAGGAACTCCTTGGGAGC
GCCCTGTCCGGANTGCCCTTGTCTCTGTCAGTGTGATTTCTTTCTGTTCTGGGAGGAGG
AGGAGGAGGANGAAGAGGAGGANGAGGNAGAACGANANNCTGCCCTTCCAGAGGTTGGTG
AGGGAGATCGCGCATGGATTTNAAACCNACCTGAGGTTTCAGAGCGCAGCCATCGGTTG
CNCTGCANGAGGCTAGCGAAGCGTACCTGGTGGNTCTGTTCGAAAGA

Sequence 943

GTCCGGTTTTGAAACAGAAATGTAGGCATTAGACTTCCTGGGCGGCAGACAAACCAAAGA
GCGGAAATTCATGCAGCCTGCAAAGCCATTGAACAAGCAAAGACTCAAACATCAATAAA
CTGGTTCTGTATACAGACAGTATGTTTACGATAAATGGTAAGCTTTCACATTTGATTTCT
TCTGTTTTTCCAGTAACTGTGAAGGGAAATTGGTAGGAGGTGTTGTAACAGGGCAGGACC
CAAATGGGAACGGGGGGATGACATTGTTTTGTGAGGTACCGAGCAAAGAGTGAGGATTTT
GGAGTCTCCCTTCTGCTGCTCTGATGTTTTCCACATGCTTATTTCTTGGCAGGCACTGG
AGATGCAGTCAAGAAGTGGGAAGTGGCTCTTACTTCTAGTCTGTGTGTGTATAAGTCACT
TAAGATGGCCGTGTTGACTGCTTCTTTGGGAAATGCCCTGAATAGGAGCATGTAGGGGAT
GCTTACCGAGGCTGGGGAAGG

Sequence 944

GCGGACGCGTGGGCGGACGCGTGGGCGGACGCGTGGGCGGGCCCCGACCCGAGCCCGACC
CCGAGCCCAAGCCCGAGCCCGAGCCCGAGCGAGACCCCGAGCCCGAGCCCGAGCGCGACC
CCCGGTGCGGCGCGGCTACCCCGCGGAGGCGGNGGGCGCGGGGCGCGCTCTGAGGCCCCG
GGGGATGCGCCCGCCGCTCGACCATGGGCGCCGCGCCTCCAGGAGGAGGGCGCTGAGGA
GCGAGGCCATGTCTCGGTGGCGGCCAAAGTGCAGAGCAGCCCGAGCGTTTGGAGAGNACC
TGTTCCAGAGTCAACCTGAGAACCACAACGGCCGCGAGATCACCTGCTGGCTGATGCCTA
CTCTGGCCACGACGGGTCCCCCGAGATGCAGCCGGCCCCCAGAACAAGCGCCGCGCTGTC

TABLE 1
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CCTCGTTCTCCAACGGCTGCTACGAGGGCAAGCCTTCTCAGAGGAAGCCCAAGCATTAGG
AAGCCCGCAGGC

Sequence 945

CGCGTCCGGCACGGGGGAGTCTGTGGTGGCCNGTTTACCTGGGCATCTGGCTGAGAGGAA
GAAAGGCCAACCTGATCCTGAGGGGACCCAGACATATCCTTTGCACTGTCCCTAGAGGGG
CGATGAGCTTTGCAGCATTAAAAAATGGTGAAGGGGGGAAATATTTGAACCAAAGACCA
AATGTTAGGCCGCCGTTATATTTGCAGAAGCTTTGAGAACCATGCGTATAGCCTCCTGCA
TTCTCCCCTCTCCTAGGAGCTCTTTTGTCTCTGTCTTACGAGGCGTCATACAGAGGCAG
TGGGGTGGGCACAGATGAGCAGAGTGGATGGTTCGGTGGGTCCCCACGAGGGCGAGTGGT
GGTCATATGTGATGGCACCGTGTTCACACACCCTCCTGTGTACCCCCCAGGGTCACCCG
AAGTCCCCACACGCTGGCTCTCCACACCCTCCTGTTCCAGAAAGCATGTCCCG

Sequence 946

TCGACCNCGCGTCCGGCACTCCCTCTGGCCGGCCCAGGGCGCCTTCAGCCCAACCTCCCC
AGCCCCACGGGCGCCACGGAACCCGCTCGATCTCGCCGCCAACTGGTAGACATGGAGACC
CCTGCCTGGCCCCGGGTCCCGCGCCCCGAGACCGCCGTCGCTCGGACGCTCCTGCTCGGC
TGGGTCTTCGCCCAGGTGGCCGGCGCTTCAGGCACTACAAATACTGTGGCAGCATATAAT
TTAACTTGAAAAACAATAATTTCAAGACAATTTGGAGTGGGAACCCAAACCCGTCAT
CAAGTCTACACTGTTCAAATAAGCACTAAGTCAGGGAGATTGAAAAGCAAATGCTTTTA
CAC

Sequence 947

ACCCCGCGTCCGCTTTTGCATCTGGATCATTTTTCTTTGCCCAACCATGTAAGAAGTGC
CTTTCACCTCCCACCATGAACCTGAGGCCTCCCGAGTCATGTGGAATCGCCCCAGCCA
CCCCACCCAGAGGGCTACGTCCTGGCAGAGCTGGGTTTGGTTAGTTCTGAGGGCTGAGC
TGGCCAGCAGCTCCAGACCTCCAGACCTTGCACCTGCACTGCACTGTGAACCTGACTCTGCAAA
TCCTCCAAGATGCGCCCAACCACTCCAGTGAACAACACCTACAGGAGCTTGGAGTTCT
ATTCTCAGATACATCAGCTTCCACATTCTGTGTGTCCCAGCTGGAGAAGCAAGAAGTCC
CAGACCATGTGCTAAGCACAGCTTGGGGTGGGGATGAAATCCAATTGGTGGTGTGTGAAT
CCATGCTGGATTATGAAGCTGAGGCCAGAGGAGGAAGCTTTCTTAATCAACTTCTTAA
CATG

Sequence 948

TAAAAGCCATGGTNATTTGTGCACTGTGCAGTTTCTTATTAGCAAAGGTGCCAATGTAA
CAGGGCTACAGCCAATAATGATCATACAGTAGTGTGCTGGCATGTGCAGGAGGCCACCT
GGCAGTTGTTGAGCTTCTCTTGGCTCATGGGGCTGACCCTACTCATCGACTCAAGGATGG
TTCAACAATGCTCATTGAAGCTGCAAAGGGTGGCCATACTAATGTAGTTTCTTATCTGTT
GGATTATCCAAATAATGTTCTGTGCACTTCCACCAAGATGTGTCTCAGCTCCCTCCACC
TTCTCAAGATCAGTCTCAGGTGCCACGTGTGCCAACGCATACACTTGCCATGGTTGTACC
TNCCCAGGAACCTGACAGAACTTCACAGGAGAACTCTCCTGCCCTTTTAGGAGTGCAAAA
A

Sequence 949

CCACGCGTNCGGTCGGCCTGTGCGGCGCTGCGGCGGAGCGGGCCATGGCAGTGGGGAGGG
GGCGAGTGTAGTGCTGCGCGGGCAGGCGGGAGGTGATCGAGAGAGGCAGGGATGGGGGC
GCCGGAGTGGAGCGTTGCGGCGGNCTGGGCTGCTGACTGCGCACTTGGAATAGTAGCAG
GCGGCGGCGGCGGAACGCCAGGCAGTGTATGTTTAACTGAAAAAGTCTCCATGAAAA
CCGTCACTTTTAAAAAATAAGGTAATGCCATTCTGTTTTTCTAAAAAAGACCTGAA
AATGGGGGGGGCCGAACACATTCTTAGGGGCCCGGTGGNTATTGAAATGTCCTTTC
AAGTTTTTCATTAAATGCNCTCCTGGCTTATTGGGCAGGACCATTCCCTTTGAACAATCC
TGGGGGCGGGCTGGGATTCAACAAGAATTAGGCAATTCTTGAATGGGCCTTCCAATA
ACCCTGNTGGGGAATTTTTCCNTTTTNGCCCCAACCTTGGGGGAATTTNATTATTTNC
AAGNTTTGGGGAAGGGTTACCCTTCNGGGGGAAANGCTTAACCCAATTTTTTC

Sequence 950

TTNNGGAGTCGCCACGCGTCCGGCCGGCGACGGCGGCAAGTGGCGGCCCGGCCTGCAGGA

TABLE 1
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GCCCGACGGGGTCTCTGCCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGC
GGCGAGACATGAGGAGACCCCGCGACAGGGGCGAGCGGCGGCGGCTCGTGAGCCCCGGGAT
GGAGGAGAAATACGGCGGGGACGTGCTGGCCGCCCCGCGGCGGCGGCGGCGGCTTGGGCC
GGTGGACGTACCCAGCGCTCGATTAAACAAAATATATTGTGTTACTATGTTTCACTAAATT
TTTGAAGGCTGTGGGACTTTTCGAATCATATGATCTCCTAAAAGCTGTTACATTGTTCA
GTTCATTTTATATTAATACTTGGGACTGCATTTTTATGGTTTTTGTTCAAAAGCCAT
TTTCTTCTGGGAAAAC

Sequence 951

NNTCCGGAGTCGACCNCGCGTCCGCGGCTGCTGCCTGCTCTGGAGGCAGGCTGGGCGGTG
GCGGCCGAGACTGGCGGGGTGGACGCCCGGGCGGCGGCTGCGCCCGCTTCTTGACAGCTGT
GAATTCCTTTGGACAATTGATGATTTATCATTGTGCCAGTTTCTACAAATAAAAGAT
GGGTGGATTATTTTCTCGATGGAGGACAAAACCTTCAACTGTAGAAGTTCTAGAAAGTAT
AGATAAGGAAATCAAGCATTGGAAGAATTTAGGGAAAAAATCAGAGATTACAAAAAT
ATGGGTTGGAAGATTAATTCTGTATTCCTCAGTTCTCTATCTGTTTACATGCTTAATTGT
ATATTTGTGGTATCTTCCTGATGAATTTACAGCAAGACTTGCCATGACACTCCCATTTTT
TGCTTTTCCATTGATCATCTGGAGCATAAGAACAGTAATTATTTTCTTCTTTCCAAGAG
AACAGAAAGAAATAATGAAGCATTGGATGGA

Sequence 952

TCNCCCCGCGCCGGTTTTGATACAGAATGAAAGTGCGTAGTATTTTCATTTTGTTTTATT
TTGCCATTATACATATAGCAAGCCCTCAATAAATAAATATTGAATGAATGAATGAGTGAGT
GAAGAATTTGTTTATAACAGTCTGTCTATCTTGATAACACTGGAATGTCTTTGGTTCTTCC
ACTTCATCCTTTATGTTTTAAACTTACACACACCATTCTTACACGTCACTAAAGGAAAAT
ACCAGTATATATTGGCTAAAATTTTTTTTTGTTGTTCAAACTGAACTCAAATGCCTA
ATTGGGCTAGGGGTCCTCTTAAAGGAGGTTGATGTTTGCAAATGGGTTATTTTTTAAAA
GCAGTAGATAATTGCTTATTTCAAGGCAAGTAAATGAATTTAGACTAAGCTGTTTCATAGG
ATTCATCATTTTTTCCCTCTCCCAAAGTAATTTGTAAGCCGTAAAC

Sequence 953

TCGCCCCGCGTCCGTGATTTCTCAGTGTTCTCCTTAGATACCAAATACAAAGGACGAGGG
ATCAAGCTCAGCGAAAGTATCAGGCATTTAAGGTATCAGGCAGCAATGCGGGGAAAGGTG
AATTTTCTTCAATCAGCATAGGATGGTTAGGGAAGAGCATTTATCACTTTGGTTCTTATC
CTTCAAGCCAGGGGAAAAGCAACAGTGAGGACATCAGAGACAAAAGCATTATAGAATA
ACAAACACAAACGTTTGACAAGTGAGAAAGCTTTATTAAGCACACATACATGTCAGGGG
GGTGGGAAACAAAAGAGCAAGTTACAGCCCGGGATCCCAAGTTATGCCTTCCATTACAAT
TGCAATCCACACCAAATCAATCTTTGAAAACATTCTCCATTGCGTTCCATACATACAGTA
GAAACCACTGTGGCTGCCCTTAATCCAGTGTGCTTATAGGAAATCAGTTAGCAGCTGACT
CTGTTGAAAG

Sequence 954

CGTCCGGACCTTATTAAGAATATCCCAGGAAGATGGTGATGAACAGCCTCAGTTTACTT
TTCCACCAGATGAATTCAGTACAAAAAATTACAACAAAAATATTACAGCAGATTGAGG
AACCATTGGCACTGGTGTGAACAATTAACCAGCAAATGTCTTTTCTAATACCATTGAA
ACTAGACAGCTTTATTTACATGTACAGCATTTGGCGCCTCAAGAGCAATAGTATGGTTA
CAGAACCGACGTGAAGCCAATGTGGAGCGAACGAGAACCACAAGCAGTGTTAGGCGAGAT
GACCCTGGAGAGTTTCGAGTTGGTGCCTCAAGCATGAAAGAGTAAAGTTCCACGTGGC
GAGTCACTGATGGAATGGGCTGAGAATGTCATGCAAAATACATGCAGATCGGAAATCAGTT
CTTGAGGTTGAATTTTTAGGAGAAGAAGGAAGTGGCTTGGGACCCACATTAGAGTTTTAT
GCTCTGGTG

Sequence 955

ACCACGCGTNCGGGCAGAAATACGGCGGCATGTTCTGCAACGTGGAGGGCGCCTTCGAGA
GCAAGGACGCTGGATTTGATGCCCTCAGCGTGGGGCAGCGGGGCGGAAGACTCCTCGG
AGCGGCCAGGGCAGCGACCGAGGATCGGGGAGTCGGCCCGGGATCGAGGGGGACACCCCG
CGCAGGGGCCAAGGCCGGNAAGAGAGCAGGGAGCCCGCGCCCGCCTCCCCGCCCCCGCC

TABLE 1
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GGGGTAGAGATCCGGAGCGCCACCGGCAAAGAGGTGTTGCAGAACCTCGGCCCAAGGAC
AAGAGTGACCGTCTNCTTATCAAGGGAGGCAGAATCGTCAATGATGATCAGTCCTTTTAT
GCTGATATTTACATGGAAGATGGCTTAATAAAACAAATTGGAGACAATCTGATTGTTCT
GGAGGAGTGAAGACCATTGAAGCC

Sequence 956

CCCGCGTCCGCTACTGTACTTTGCAGTTTGATGTTTATTAACATTCTTTGGGCACCTAGC
TACAATATAACTCAATTTTCTGTGAAAACTATTAATCATCCTATTTTTCTTGCTTT
AATATGAGATAAATTTTATACCACTGTTTCTCAAACCATCTGTTGTGAGGGACAGTTTG
CTTTTTAATTTCCAATTGTCAGAGACCAATACTTTTGTAATAATAATTAAAAACAAACA
TAAAAATAAACTTATTAGAAAAATGAAATAAAAGAGAAATGAAATAAGAATAATTTATT
ATTAGATTTAACAGATCAAATATTATTTCAATACTCAGATCAAATGTGCAATAAGACAGG
GTTGCAAAAAATGCACACTTTTTTATTAAATCATTTATATAAGTAATTTATATAAAAA
TAATATTACAGTTGCAACTTTCTGGTGNTTCTCAACTATGACCAAACAGGAGGGTACAAG
TAAAGGAGCAATCCCAA

Sequence 957

GTCCGACCACGCGTCCGCAGCAAAAGTGCCTGGCTGAAGGACACTGTTGACCCAAAACCTGG
TGACCCTCAACCACCGCATTGCTGCCCTCACAGGCCTTGATGTCCGGCCTCCCTATGCAG
AGTATCTGCAGGTGGTGAAGTATGGCATCGGAGGACACTATGAGCCTCACTTTGACCATG
CTACGTACCAAGCAGCCCCCTCTACAGAATGAAGTCAGGAAACCGAGTTGCAACATTTA
TGATCTATCTGAGCTCGGTGGAAGCTGGAGGAGCCACAGCCTTCATCTATGCCAACCTCA
GCGTGCCCTGTGGTTAGGAATGCAGCACTGTTTTGGTGGAACCTGCACAGGAGTGGTGAAG
GGGACAGTGACACACTTCATGCTGGCTGTCTGTCTGCTGGTGGGAGATAAGTTGGGTGGCC
ACAAGTGGATACATGAGTATGGACAGGAATTCCGCAGACCCTGCAGCTNCAGC

Sequence 958

GTCCGACCACGCGTCCGCGCCAACTCCGGAGGCGCGGTGCTCGGCCCGGGAGCGCGAGCGG
GAGGAGCAGAGACCCGCAGCCGGGAGCCCGAGCGCGGGCGATGCAGGCTCCGCGAGCGGC
ACCTGCGGCTCCTCTAAGCTACGACCGTCTGCTCCTCGCGGCAGCAGCGCGGGCCCCAGCAG
CCTCGGCAGCCACAGCCGCTGCAGCCGGGGCAGCCTCCGCTGCTGTCGCCTCCTCTGATG
CGCTTGCCCTCTCCCGGCCCGGGACTCCGGGAGAATGTGGGTCTAGGCATCGCGGCAA
CTTTTTGCGGATTGTTCTTGCTTCCAGGCTTTGCGCTGCAAATCCAGTGCTACCAAGTGTG
AAGAATTCAGCTGAACAACGACTGCTCCTCCCCGAGTTCATTGTGAATTGCACGGTGA
ACGTTCAAGAC

Sequence 959

CCACGCGTCCGAGGGTGGGGAAAGGAGGAGAGGAAGAGCACTCCCTTCCCTGGCCCCCTCA
TCCAGCCTCCGGTGCTGTAAAACGCAGGCGCTGGGCCGCGGGCGGAGCTGAGGACAGGCC
TTGGCTGGTCCCAGGATGAGCGACGAGTTTGGTTTTAGCTGGGGATTGTGCTGGCATCCT
GCGAAGCTCCTCCCAGCCGGTCTCTGTGCTCGGTTGTCTTGGGGTGGGGCCCATCCGC
CGAGGTGGGGACCGATAGGAGAAGCCGGTGGGTTGTACCCTTACACTTGTGGAGTCTCCT
CTTGCTCTACCTACTCCGCCTTTGTCTTAAGTTTTTGCAAGGCCAGTGCCAAACACAC
ACTAACTGTCTGCTGCTCCTGACACAAGTCTCTTCCAGCCTTCTC

Sequence 960

CCACGCGTCCGCGGACGCGTGGGGCCGGGACAACCTGGTCTTATCACGGAGGCTGGGGCCA
NGGCAGCCCTTCGGTTCGGGTGGGCCCATGGACCCAGTCCAACGCCGAGGGAATAGGAC
CATCCAAAAGCGGAACCTTCGCCTCAGAAAAAGGGTGGGGACCCCTCCTCACCGTGGCG
TCACGCGTGGACCCTGCCAGCAGCCAGGCCATGGAGCTCTCTGATGTACCCCTCATTGAG
GGTGTGGGTAATGAGGTGATGGTGGTGGCAGGTGTNGGTTGGTNGCTGATTCTAGCCTTG
GTCCTAGCTTGGCTCTCTACCTACTTAGCAGACAGCGGTAGCAACCAGCTCCTGGGCGCT
NTTGTGTCAAGCAGGCGACACATCCGTCTNCACCTGGGGCATGTGGACCACCTGNTGGG
CAGGCCAAGGCNNCCCCGAAGCCAACCTGA

Sequence 961

NCCCCGCGTCCGGGAGGCTCCATGTTGTCCCTCAGCGAGTGGCAGCAGCTGCCTCAAGA

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GGAGCAGATGATGCCATGGAGAGCAGCAAGCCTGGTCCAGTGCAGGTTGTTTTGGTTCAG
AAAGATCAACATTCTTTGAGCTAGATGAGAAAGCCTTGGCCAGCATCCTCTTGCCAGGAC
CACATCCGAGATCTTGATGTGGTGGTGGTTTCAGTGGCTGGTGCCTTCCGAAAGGGCAAG
TCCTTCATTCTGGATTTTATGCTACGATACTTATATTCTCAGAAGGAAAGTGGCCATTCA
AATTGGTTGGGTGACCCAGAAAGAACCGTTAACAGGATTTTCCTGGAGAGGGGGATCTGAT
CCAGAAACCACTGGGATTCAAATCTGGAGTGAAGTTTCACTGTGGAGAAGCCAGGTGGG
AAGAAGGTTTGCAGTTGTTTCTGATGGATACCAGGGGGCAT

Sequence 962

GCCCCGCGTCCGCTTCTCCGAATATAGCAACGTCCAGCAGTGTCCACACTGTGGGAACCT
GGACTACCACTTCGTGAAGCCATTTTCTCCTTCAAAGTTCTCGAAGCTTATTGATGAAA
GCTTTGCTTTAGTAATAGCTATTTTATTGATATTATTACTTTATTACATATCTTTTATAG
GGAAACATTCTGTGACATTAATTTCTTTCTAATTTAAAGGAGAGTTACTTTGTTGTATG
TGTGCCACTAAAATAGGGGCTGCCCTTGCCTGTCTTGATTCCCGAGTGTTAATCTGTGG
TTTTGACCAGAGCCCAGATGGGTAACTCTGTGCATTTGGGTTGGGGGTTCACTCTTACCA
AGAATCTTTGATGCAGCTTTAAGATGGTGGGGAGATGGGGGTTGAATTTAGGGAAAGAAT
NTTGTGGGTTATAAACTAAGAGCTTGATAGGAGTTGGAAGGAAACTCTTACTAAAATGT
TAACTTTCTAAAAACCTTCTTTTANATCTTNCTTGGGCCTTTGAAAA

Sequence 963

GTGTTTTGGGGATGCCTTTCTTACCAGATTCTTCTAAAGCCCAGCTGCACCCACCCTTA
AGTGGGAGATAAGGCTTCTGCCCCGCGGCTCTGCGTTCGTCCACCCGCCCCACGTTTGC
TGTGGACTAAACAGGAGCCACTGGACTAGAGTACACTTGACTCTCGGCTCTGCGGACCAA
AAATTCAGGACTAAGGAATAGCAAGGTTAGGCTGAAACAGTCCACACAGGGCTTGCAGT
AAACGTCTTTTTCAGGAGCCACTCGCCAGTGCAAGTAAAGTCGTGTACTTAGTTGACTCGAG
CGCTCCAGGGAGACGCCCCGACCCTACTCTGCGCCGCCCCGGGGCACCAGCTCTGCTTCT
CCAGGTCCACTGAGGCAGGCACGCCCAGCTCTGGGACAGGTGAGTAAACAAGCCACGAAC
CGCGCCAGGGATCAGAGAACCCANAGTCCCCGCCAGCTGCCGGCACAAGCCAATCGCAGC
GCANCCAGGCGGC

Sequence 964

GTCTAAGGGATCCAGGTCTGTGTCTCAGGGACCTCTGATGGGATTGAATCCAAGAGGAA
TGCAGGGGCTCCAGGCCCNCGGGAGAACAGGGTCTGCTCCCCAAGGGATGATTATGG
GCCACCCGCTCAAGAGATGAGAGGACCTCACCTCCAGGTGGACTACTGGGACACGGCC
CTCAGGAAATGAGAGGTCTCAGGAGATCCGAGGCATGCAGGGGCCTCCACCCCAAGGAT
CAATGCTGGGACCTCCCCAGGAATTGCGAGGGCCTCCAGGCTCACAAAGTCAGCAGGGGC
CGCCCCAGGGCTCTTTAGGACCTCCACCCAGGGTGGCATGCAAGGACCCCCCGGACCTC
AGGGACAGCAGAACCCAGCAAGAGGGCCACATCCATCTCAAGGGCCAATACCATTCCAGC
AACAGAAAACGCTCTGCTAGGTGATGGGCCCCGGGCCCCCTTCAACCAGGAAGGACAGA
GCACAGGCCCCCACC

Sequence 965

TGCGCATGCGCGGAGCGCGGCGCGCGCGGCGGTTGGCCGTTGGCTGTTTCGGCCCTGGGA
TCCGCCGCCACTCCGCGATCAGACCGCTCTGTGCCGCGAGCCGCGTGAGCACTCGGATT
CAAGCCGGCGCCAACGAGTCCGGGGGCATCGCCCGCAGCGGCCAAGCTCATGGCCGGCTG
AGCGGGACGCCGCTNCGCCTCAGCCACCGCCGCGCGCGGCTTCTCTCTCCTCAGCCG
GCGGCGGCCCGGGGCCAGCAACCATGGCTGAAGACTACTGGGACGGGCGCCTGCGGCGAA
CAGGAGGAGAAAGGGAGGTGCGCGGCCCTCATTCCGGGCGCGCGCCCCAGGCGCGCGCGC
GCCGCCCCCGCGGCTCTGAGGTTGCTCGCGCGCCCC

Sequence 966

TGGAATAATTTTTGAAAAAATTACCCTTGGGACCTTGNTTTTNAANCCCNAGGTTCCCN
GTTNNGGCAAATAAANAATGNNNGACCCGGGATTTNNGGNTTNAAACCGGGGGTTTTT
AATTTCCCNNNNCNNGGNCCTTTTTTTTTNCCNCCCCCNCAAGGGGNTTTGGGAAAN
NAAANCCCCCCCCCTTTTTTTTTNNGGGGNGAAANTTCCCCGGGTNNNNGCCNTTTTTTTT
TTTTTAAA

TABLE 1
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Sequence 967

GTCCGCGAGGCTCCGCACCAGCCGCGCTTCTGTCCGCTGCAGGGCATTCCAGAAAGATG
AGGATATTTGCTGTCTTTATATTCATGACCTACTGGCATTGCTGAACGCATTTACTGTC
ACGGTTCCCAAGGACCTATATGTGGTAGAGTATGGTAGCAATATGACAATTGAATGCAAA
TTCCAGTAGAAAAACAATTAGACCTGGCTGCACTAATTGTCTATTGGGAAATGGAGGAT
AAGAACATTATTCAATTTGTGCATGGAGAGGAAGACCTGAAGGTTCAGCATAGTAGCTAC
AGACAGAGGGCCCCGGCTGTTGAAGGACCAGCTCTCCCTGGGAAATGCTGCACTTCAGATC
ACAGATGTGAAATTGCAGGATGCAGGGGGTGTACCGCTGCATGATCAGCTATGGGTGGTG
CCGACTACAAGCGAATTACTGTGAAAGTCAATGCCCCATACAACAAAATCAACCAAAGA

Sequence 968

CGTCCGGGAACCTCAGCAACGGTTTCTTCATCCAGGACCCGATTGCTCTGGTGGAGAGGGG
GGGCTGCTCCTTCTCTCCAAGACTCGGGTGGTCCAGGAGCACGGCGGGCGGGCGGTGAT
CATCTCTGACAACGCAGTTGACAATGACAGCTTCTACGTGGAGATGATCCAGGACAGTAC
CCAGCGCACAGCTGACATCCCCGCCCTCTTCTGCTCGGCCGAGACGGCTACATGATCCG
CCGCTCTCTGGAACAGCATGGGCTGCCATGGGCCATCATTTCCATCCCAGTCAATGTCAC
CAGCATCCCCACCTTTGAGCTGCTGCAACCGCCCTGGACCTTCTGGTAGAAGAGTTTGTC
CCACATTCAGCCATAAGTGACTCTGAGCTGGGAAGGGGAAACCCAGGAATTTTGCTACT
TGGAATTTGGAGATAGCATCTGGGGACAAGTGGAGCCAGGTAGAGGAAAAGGGTTTGGGG
CCGTTGCTAGGCTGAAAGGGAAGCCACACCACTGGCCTTCTTCCCCAGGG

Sequence 969

GATTGGAGGAGTCACATCCCCTCTTCAGCCGCAGCACCCCTCCCTCCCATCCTCTAGCTC
TTCCCGCGGTGGTGCCTCCCTCCGACCCTGCTCTCCCCTCCTGGGCCCCGCGCAAAGCC
CCCTCTGTTCCAGCTCCCGGGCCTCGGCTGCTCCTCCCGCCCTCCCATCCCTTCTCTTCC
CAGGGCCTGGAGCGCTCCCTTACATTCTGAGATGCCCTTCTCCTCGGGGCTGCCCCCTTT
GCCTCCCCAGCATCCCATTCTAGGCCTTTTTCAAGACCCTTCCAGAGCGGCCCTTTCC
AGCTCCCTTTCTCGTTTCCATTTCCAACCTTGCCTCTTTGCCTCTTTGTTCACTTTGCT
TCCAAGCTCCCCTCCCTCTTCCCTTCTGCTTACCCTGCTTTGATCTACGCAGCCCCAAA
CTCAAGCTCCCCGCTTTCAAGGTGGTGCGAGGTTGTTGGGGGTGCGGAAGGGCCTGCCA
AGTCCATTTTTCGAGGGG

Sequence 970

GTCCGAGATCGCGAGCCGCGCCCTTTTTTTTTTTTTATAAGATTATTAGTATAAAAN
GGGGAGACGAGGTTAGGGCCCTGGGAAAGGTGGGAGATCAGCCAGAGACAGGTTTCCCAG
AACAGAATGTCTGGCCTTTGTGGTGAGGAGGGACTGTGGTATGAGCCGCAGAAGCGGGCC
AGGGGTAAACCCTCCTGTGCGTCTTCTTCAGCCTGGTCCTGAGGGTGACCCTTTGATC
CTGGGTTCTCCAGGTAGGGCTGTGAGCTGTGAGTTGGATCCTTTTGGTGAATGGTCTCT
CTCATCTGGCCTGTCACTCAATGTGGAATAGAGTGAGTGAGTTCTATGGGTTCTAAGTCC
TGCTCTGGAACCATAAGTAAGTTATCCTCTCTGGGCTTCAGTTTTTTCATGGAAGTTGCG
TTAAGAATCTAGTTAAGGCCAGGCATGGTGGCTCACCGCCTTGTAATCCCAGCACTTTG
GGGAGGCCAAGGAAGGTGGATCATGANGTCAGGAGATCGAGACCATCCTNGCTAACATGA
TNAACCCGTGTCTTTACTTAAAAAATAC

Sequence 971

CCTGCCAGTGGTGAGCACCTTCGGCCTCCAGGTGCCTTTCTTCTTTCGCGGCCATNTG
CTTGGTGAGCCTGGTGTTCACAGGCTGCTGTGTGCCGAAACCAAAGGGACGTCCNTGGA
GCAAATCCGAGTCCTTTTTCCGCACGGGGAGAAGGTCTTCTTGCCTAGGTCAAGGTCC
CCGCCTGGAGGGGGCCAAACCCCCA

Sequence 972

GCGTCCGCGGACGCGTGGGCGGACGCGTGGGTGAGCCTCCACCTGGAAGAGAGCTANGGG
CCGGGCAGGCCGGGCAGCTGCCACCCCGCCCGGCCCGACGCCCGCATGCCCCGAAGTCC
CTGGCGCCACCCGGCCGCGGCCCTGCGTGTGACCCGCGGGTCGATACCTGGCAGCCCCA
GTGCTGGGGCGCCGCGGCCCTGCTCGCCCAGGAGGAGAGCGAGGGCCCCACACTGAGTCT
CTTGAAGCCTCACGTTTCCCTGGGGGGGTGCTGCATCGTGGGTGTCCCTACCCACCT

TABLE 1

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GGGGAACCTCTGTCTTCAGGTCACCCCTTTTCAGGGGCCTGG

Sequence 973

CGTCCGGGACCCTGCTCATGGAGAACATCAGCAGCTGGCTGCTCCTTCGCTGACGCCCTG
GGCTACGTGAACCTGCCGCTCACCTTTTTCTGCCGGGCAGAGCTGGATAGTGAGCCCGAG
CGGGTGGCGTCCGTCCTGGAAAAGCTGAAGGAGGACTGNAACAACACTGAGAACAAAGAA
CGGAAGTCCTTNCAGAAGGAGCTTGTGATGGCCCTACTGAAGATGGACTGCCAGGGCCTG
GTGGTCAGACTCATCCAGGACTTTGTGCTCCTGACCACGGCTGTAGAGGTGGCCCAGCGC
TGGCGGGAGCTGGCTGAGAAGCTGGCCAAGGTCTNCAAGCAGCAGATGGACGCCTACNAG
TCTCCCCACCGGTGACAGGAACGGGGTTGTGGACAGCGAGGCCATGTGGAAGCCTGCGTA
TGACTTCTTAC

Sequence 974

TCACCACGCGTCCGCGAAGCGTGCACCGCTGCGCCCCGCGCGGTGAGCGCGGGGAGCGCC
GCAAGCCCAACGCCGGGGGAGCCCCGCTCCGGTGCGCCGCCGNCGGAGGCCTCGCCGG
TGCAGAAAAAGGAGAAGAAGGACAAGGAGCCGGGAAAAACGAGAAGGAGAAGAGTGCCCTA
GCCCGGGAGCGCAGCCTCAAGAAGCGCCAGTCGCTGCCCGCCTCCCCACGTGCCCGCCTC
TCTGCCAGCACCGCCTCTGAGCTCAGCCCCAAATCCAAGGCCAGGCCATCCTCTCCCTCC
ACATCCTGGCACAGGCCTGCCTCCCCCTGCCCCAGCCAGGGCCAGGCCACACTCTGTCT
CCAAAGCCACCGTNCCTCCGAGGCACCACTGCATCCCCCAAGGGGGCCGGGTTGGAGGAA
GGAGGAGGCAAAGGAGAGCCCCAGCGCCGCANGGCCGAGGACAA

Sequence 975

TCCGCAGAAACGGACTTTCTCATCATGCTTTCCTATGGTGGGTATGAGGGGCCAGCTGAT
ACCAACCAACTGGCCTGTATCTATCTATCTGGATTTGACTTGAATTTTTAAATGTGTAT
CGTTTTAAAAAAAAAATGTTTGCAAATTTTGCACATAGGATCTTGCACTGTTCAATTTCA
GTGGGGTGAGTCTTCACACTAAAAACACAAGCAGAGCTCCTGGGAAAAGAGACTGGAAGT
GGTTCAGGATAAAGAGATCCATGGTGGGCAGGGCTCTTAGGTCACAGAGCTCTAGAAGCA
GCTGGACTTGAACCCACAATGGCTTGTGTAAATTCGTAAATTTTCATGGTTTCTAGGAAAA
GCTGCATTG

Sequence 976

GCGTCCGGAAGAACTGTGGAAGTGCAGGTTGGCAGACAATTTTGTACAAATATTAAGG
AAAGATTTTGCCAATATGACCAGCTTGGTGACCTGACTCTATCCAGGAATACAATAAGT
TTTATTACACCTCATGCTTTCGCTGACCTACGAAATTTGAGGGCTTTGCATTTGAATAGC
AACAGATTGACTAAAATTACAAATGATATGTTCACTGGTCTTTCCAATCTTCATCATTTG
ATACTGAACAACAATCAGCTGACTTTAATTTCTCTACAGCGTTTGATGATGTCTTTGCC
CTTGAGGAGCTGGATCTGTCCTATAATAATCTAGAAACCATTCTTGGGATGCTGTTGAG
AAGATGGTTAGCTTGACATCCCTTAGTTTGGATCACAATATGATTGATAACATTCCTAAG
GGGACCTTCTCCCATTTGCACAAGATGACTCGGTTAGATGTGACATCAAATAAATTGCAG
AAGCTACCACCTGACCCTCTCTTTCAGCGAGCTCAGGTACTAGCAACCTCAGGAATCATA
AGCCCATCTACTTTTGCAATTAAGTTT

Sequence 977

NCTCCAACAATTATGGCTCATCCTTCCTTTTACTCTGTCTCACCTCCTTTAGGTGAGTAC
TTCCTTAAATAAGTGCTAAACATACATANACGGAACNGAAAGCTTTGGTTAGCCTTGCC
TAGGTAATCAGCCTAGTTTACACTGTTTCCAGGGAGTAGTTGAATTACTATAAACCATT
AGCCACTTGTCTCTGCACCATTTATCACACCAGGACAGGGTCTCTCAACCTGGGCGCTAC
TGTCATTTGGGGCCAGGTGATTCTTCTTGCAGGGGCTGTCTGTACCTTGATAGGACAGC
AGCCCTGTCTCTAGAAGGTATGTTTAGCAGCATTCTTGGCCTCTAGCTACCCGATGCCAGA
GCATGTCCTCCCGCAGTCATGACAATCAAAAAATGTCTCCAGACATTGTCAAATGCCTC
CTGGGGGGCAGTATTTCTCAAGCACTTTTAAGCAAAGGTAAGTATTCATACAAGAAATTT
AGGGGGAAAAAACATTGGTTAAATAAAGCTATGTGTTCTATTCAACAATATTTTT

Sequence 978

CCCCGCGTCCGGGTCCCCGCGACTCCCGGACTGGAGAAAACGGCTCTTGCGATGGGGCGA
AGTCCGAGCTGCGGCGGGCGTTGGTCCGTGCAGGGAAGTGGAATCGTTAGGTTCTGTTCT

TABLE 1
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GGACCCGCCGCCCATGGCCCAGGCGTCTCGCTCAGGTAGCCTGCCTCCACTCGTTATCG
TGCCCCCGCTGAGGGCGCAACCCGGGGGCACTGGGGAGGAGCAGTGGGAGAGAAGTCGAA
CGGNCGGNCTTCCGCTGGGCAGAGCTCAGCAGTACTTGGCAGCATGGGACCCAGCTTCCT
TCCTGCTCCTGATCCAAAAGGACTTACCTNCTCTGTTGCATGAGGCAGAAGCTTTGTATA
GCCTGGCCTCAGAGGAAAGCTTAGCTCTGGAAGTGGAGCAGCAGCTGGGCCTGGAGATCC
AGAANCTGACTGCACAGATCCAGC

Sequence 979

AGGCTGNTACGAAGCGAGCTTGGGAGGAGCAGCTGGCCTGCGGGGAGAGGAGCATCCCCG
TCTACCANGTCCCAAGCGGTGTGGCCCGCGGGTCATGGNCAAAGGAGAAGGCNCCGANAG
CGGCTCCNCGGCGGGGCTGNTACCCACCAGCATCCTCAAAGCACTGAACGCCCGGCCCA
GGTGAAGAAAGAACCAGAAAAGAAGAAACAACAGTTGTCTGTTTGAACAAGCTTTGCTA
TGCACTTGGGGGAGCCCCCTACCAGGTGACGGGCTGTGCCCTGGGTTTCTTCTTCANAT
CTACCTATTGGATGTGGCTCAGGTGGGCCCTTTCTCTGCCTTCATCATCCTGNTTGTGGG
CCGANCTGGGATGCCATCACAGACCCCTGGTGGGCCTCTGCATCAGCAAATNCCC

Sequence 980

ACCCCGCGTCCGGAAGAAGAGTGGCCNGTTCCAGGGGTAGCTCCAAAAGAGACTGCAG
AGCTGTCCGAGACCTGACAAGGGAGGCCCAAGGCAACAGTTCGCGAGGAGTGGAGGCAG
CAGAGCAGAGGCCTGTGGAAGATGGCGAGAGGGGCATGAAGCCAACAGAAGGGTGGAAAT
GGACCCTGAACCTCCGGAAGGCTCGAGAATGGACACCCAGGGACATAGAGGCTCAAACCTC
AGAAACCAGAACCTCCAGAGTCAGCAGAGAAGCTTCTGGAATCTCCCGGTGTGGAGGCTG
GAGAAGGGGAGGCTGAGAAGGAGGAGGCGGGGCTCAGGGCAGGCCTCTGAGAGCCCTGC
AGAACTGCTGCTCTGTGCCCTCCCCCTCCCACCAGAGGACGCTGGGACTGGAGGCCTGA
GACAGCAGGAAGAGGAAGCAGTGGAGCTTCAAGCCCCCACCACCAGCCCTCTGTCTCC
CCCACCCCGAGCCCCAACTGCCCCCAACCTTCTGG

Sequence 981

GCCCCGCGTCCGAAAAGAATGGGTGAACCAATCGGCCTTTGTGAATTTATTTCAGTGCCTT
CTCTGTACCAAGCACTGGGTAAAGCACTTTTGTGGAGCATTAGACAGTAACCCTCAAGGA
GCTAGAGAACCAGGATGGGAGACATGAGCGGTAATTAACCTACTTGTTCCCGAGAGTTTCT
ATTTGTTTTGATTTTCTTTTCTGTGACTTATTTTCTATTTTCTTCTCCATGTAATT
TTCATATGGCCCAACTAATAAACAACCTGGAAATTACAAGGAAAAAAATTTCTTCCTC
TAATAACTTTCCAAATTTGTGGAATATTTATTTGTAATAGCAGTTATCAGTTATGCTTAT
ATAGCATTAATAAATTTCTCCTCTTTGACTACACACACAACCACAGTGTGGTTCTAATCAT
GGAGATATCAGTAATTTTGTAGTAAGTGAATTTTGAGGACATTTCTNTGTTTAGCATGTAT
GCAAACCTGATATGTAATCTGAGGTTCCAAAGTCAATTTTTTTCTTTTTT

Sequence 982

TNGGGAGTCGACCCCGCGTCCGGTTTTTGTGAGGCAGTGAGACCTAAGGTAACCTTTATC
AAAAGGATGGAGTTGGGAAAAGGAAAACCTACTCAGGACTGGACTGAATGCGTTGCATCAA
GCAGTGCATCCGATCCATGGCCTTGCTGGACCGATGGGAATCAAGTTGCCTAACTGAT
TTGCGGCTTCACAGTGGAGAGGTCAAGTTTGGGACTCCAAAGTCATTGGACAGTTTGAA
TGTGTCTGTGGGTTGTCTGGGCCCCACCTGTTGCAGATGATACACCTGTTCTACTCGCT
GTCCAGCATGAGAAGCATGTCACTGTGTGGCAGCTGTGTCCCAGCCCTATGGAGTCAAGC
AATGGCTTGACGTCTCAGACTTGTGAGATTAGGAGGGATCACTACCTATCCTTCCCCAG
GGCTGTGTGTGGCACCCAAA

Sequence 983

GTGTCGACCCCGCGTCCGCGCCCTGCCTGCAGTTGAGATTCAGATGCCTTCTGACAGAGT
TCAGCCTCTTGAGAGTCTTGGGGATTGTTGGCACCTAAACAGAATCAGNGACCCGGGTG
CTTTGTGGCCAGCAGCACAGAATCAAACCCGCATCCCAGCATTGGGCCACCCATCTGAGG
GAGGCCAAAATCATCACAGATGCTGCTGTGCTGCAGACAGATACATGCTAGTCCAGAGAG
CCGCCCCGTGAGATGGCTGTGAGAACCATGTGTCTAAGGCGTAAGATAAGGATGGAAGGCT
GTCCAAGTTATTTGGAAGGCCTCGGCAGCTTGGGATTAGCTTGGGAGCGCAGCGCTGCAA
AGTGGAATAATGAAAAGACCACACAGGCCCAAGCAGTCCAGAAACTGGGCAAAATATT

TABLE 1

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CTGCAGTGGGGATTATTTTTT

Sequence 984

CACGCGTCCGGAGTACGGAGTTGTTCTTTACTGGCTGAAAGATATATTCGAATTGTAAA
GATGCTTTTTCTCATGCATTGAAATTATACATTATTTGTAGGGAATTGCATGCTTTTTT
TTTTTTCTCCCGAGACAGGGTCTTGCTCTGGCGCCAGGCTGGAGTACAGNGGCATGAT
CTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCCTCCTACCTGAGCCTTCTGAGT
AACTGGGACTACAGGTGTGCACTCCTCGCCTGGCTAATTTTTTATTTTTGTACAGGCAG
GATCTTGCCACCTTGCCAGGCTGGTCTTGAACCTCTGAGCTCATGCCATCTGCCTGCCT
TAGTCTCCCAAATGCTGGGATTACAGGAGTGAGCCACCATGCCCGCTGGCAGTTGCAT
GGAAGAGAACACCTNTTATGGCTTACCCTCTAGAATTTCTAATTTATGNGNNCTGTTGA
AATTTTTGGTTTTTTTACCT

Sequence 985

GTGACCACGCGTCCGCTCGGCTTCTGCTGATGGTCAGGGTTTTGGCACTCCCGGTG
TGAGAGGGGTAGGGAGTGCTCCCGGCGGCGACGGGGCCGAGTTCACCAGCCGCCGGGGCA
GTAGTCGAAGGCCCGGCGCGGCATGTCTGGGTGCCGCGGTGCGGGCAGTGAACGCGCGC
CGGGCGGATGGGCGGCGCGCGGGCGCCAGAGCTGTACCGGGCTCCGTTCCCGTTGTACG
CGCTTCAGGTGACCCAGCACTGGGCTGCTCATCGCTGCGGGCGGAGGAGGCGCCGCCA
AGACAGGCATAAAGAATGGCGTGCACTTTCTGCAGCTAGAGCTGATTAAATGGGCGCTTGA
GTGCCTCCTTGCTGCACTCCCATGACACAGAGACACGGGCCACCATGAACTTGGCACTGG
CTGGTGACATCCTTGCTGACGGGGCAGGATGCCCACTGTCAGCTTCTGCGCTTCAGGC
ACATTAACAGCA

Sequence 986

CGCCACGCGTCCGCTACGCGTGCGGCGGACCGAGCGTGCGGACTGGCCTCCCAAGCGTG
GGGCGACAAGCTGCCGAGCTGCAATGGGCCGCGGCTGGGGATTCTTGTTGGCCTCCTG
GGCGCCGTGTGGCTGCTCAGCTCGGGCCACGGAGAGGAGCAGCCCCGAGACAGCGGCA
CAGAGGTGCTTCTGCCAGGTAGTGTTACTTGGATGATTGTACCTGTGATGTGAAACC
ATTGATAGATTTAATACTACAGGCTTTTCCCAAGACTACAAAACTTCTTGAAAGTGAC
TACTTTAGGTATTACAAGGTAAACCTGAAGAGGCCCGTGCTTTCTGGAATGACATCAG
CCAGTGTGGAAGAAGGGACT

Sequence 987

GGTCGCCCCGCGTCCGTAGCAGTTACATCTACGAGGCTATTATGGATTGGAGGATGAGAA
GGGAACTGCATGTACCTCAACAAGGCGTCCGTCAACACCGCGAAGTTTGGCAGGCTTGAC
AAGTGGAGTTTTTGAATCTATAATGGTTCAAGTTTTGAGACAGGAAGAAGCTGAGAGC
AAAAGAAGAAAAAGGCTTCGGGAGCAGGAAAGAAAAGAAGCAGAAGAAGCTAGTCAAAA
GGAAATAGAAGAATGGGAAAGAAAACCTTAGCTCAAGCAGCTCCAACTTGATGGAGAC
CATGTGGGAAATTCAGCTATTGGGCATTTCTTTGTTTAGCTCAGCAAATTCTAAATTT
GCCAGAAATAGTCTTTTACCGAACTGGAACCGTTGTCTTCTGATGCCTCAGTGTAATGCT
TTTCTATCGAAAATAATGACTTCTTATTTAAGTCCTCCCATCGCAGA

Sequence 988

NCCCCGCGTCCGAGTCCCCTGTCTGTGGCACCAGACACTCCCGACTGTGCGCTGACTCTC
CCCGCCAGCCAGCAGCCTTTCCAGAGAGGCTGTGGTCCATAGCCTCTGTTCTGTTTTCA
CTGCAGGACCAGGCACGAAAGTTAAACAAAATGAAGATTTTTCTGAATCTCATAAAAC
AGTGTGTTGTGGATCACTGCCCTTATATGGCAGAATCTTGCAAGGCAGCATGTGAGTT
TGATATGCTGGTGAAGAATAGAACCAAGGAATCATTCTTTGGCCCCCATATCTAAATC
ATTGTGACTTGCTCAGTGAATCTTCCATGGAATATTGTAGAATAATGTATGATATATT
TCCTTTCAAAAAGCTGGTGAATTTTATTGTGAGTGACTCTGGAGCACATGTTTTAAATTC
TTGGACTCAAGAAGACCAAAATTTACAGGAGCTAATGGCAGCATTAGCCCGCTGTTGGGC
CTCCTAATCCTCGGGC

Sequence 989

GTGCCCCACGCGTCCGTTCTGTTGTCTGATGGACCTGCTTGCAAAAGGCCAGCTCTGTTGC
ATTCCCAATTTTTGACACCACCTCAAACACCAACGCCCGGGAGAGCATGGAAGATGTTG

TABLE 1
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ATCTCAATGAACCCAAACAGGAGAGCAGTGCTGATCTGCTTCAGAACATTATCAACATTA
AGAATGAATGCAGCCCCGTTTCCCTGAACACAGTTCAAGTTAGCTGGCTGAACCCCGTGG
TGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTCAGGACTTCCATGGAGGGCAGGTCTTTT
CTCCACCTCAGAAATGCCAACCATTCGAAGTCAGGGGCTCCCAACAAATGATAGACCAGG
CTTCCCTGTACCAGTATTCTCCACAGAACCAGCATGTANAGCAGCAGCCACACTACACCC
ACAAACCAACTCTGGAATACAGTCCTTTTCCCATACCTCCCCAGTCCCCCGCTT

Sequence 990

GTCCGGCTGGGACCTCCTCCTGTTGGGGTCCCCATGAACCCCTTCCAGTTCAACCTTTCA
GGACGGAACCCCCAGAAACAGGCCCGGACCTCCTNCTCTACCACCCCAATCGAAAGACA
ATGCCTGTGGAAGACAAGTCAGACCCCCCAGAGGGGTCTGAGGAAGCCGCAGAGCCCCGG
ATGGACACACCAGAAGACCAAGATTTACCGCCCTGCCAGAGGACATCGCCAAGGAAAAA
CGCACTCCAGCACCTGAGCCTGAGCCTTGAGGCGTCCGAGCTGCCAGCAAAGAGATTG
AGGAGCTCAGAAGAGCCACAGAGAAGGAACCTCCAGGGCAGTTACAGGTGAAGGCCAG
CCGAGGCC

Sequence 991

NCGCGTCCGCTTAAATGACTCGTTATCATTTTGAATGAATGGAAAATCATTCTCAGTGA
TACTGGAGCATTTTCAAGACCTTGTTCTTAAGTTGATGTTGCATGGCACCCTGTTTGCCC
GTATGGCACCTGATCAGAAGACACAGTTGATAGAAGCATTGCAAAATGTTGATTATTTG
TTGGGATGTGTGGTGATGGCGCAAATGATTGTGGTGCTTTGAAGAGGGCACACGGAGGCA
TTTCCTTATCGGAGCTCGAAGCTTCAGTGGCATCTCCCTTTACCTCTAAGACTCCTAGTA
TTTCCTGTGTGCCAAACCTTATCAGGGAAGGCCGTGCTGCTTTAATAACTTCCTTCTGGT
GTGTTTAAATTCATGGCATTGTACAAGCATTATCCAGTCTTCCAAGTGTTACTCTGCTGT
ATTCTATCTTTAAGTAACCTAGGAGACTTTCCAGTTTCTCTTAATTTGATCTGGCAATCT
TTTGGGTAAGTGGGTATTTANAAT

Sequence 992

TTTTCACTGCAGGACCAGGCACGAAAGTTAAACAAAATTGAAGATTTTTTCTGAATCTC
ATAAAACAGTGTTTGTGTGGATCACTGCCCTTATATGGCAGAATCTTGCAGGCAGCATG
TCGAGTTTGATATGCTGGTGAAGAATAGAACCCAAGGAATCATTCTTTGGCCCCCATAT
CTAAATCATTGTGGACTTGCTCAGTAGAATCTTCCATGGAATATTGTAGAATAATGTATG
ATATATTTCTTTCAAAAAGCTGGTGAATTTTATTGTGAGTGACTCTGGAGCACATGTTT
TAAATTCCTTGGACTCAAGAAGACCAAAATTTACAGGGAGCTAATGGCAGCATTAGCCGCT
GTTGGGCCTCCTAATCC

Sequence 993

CGCGTCCGGGCAGGAGCACCCTCAAGGAGCTACACCCCTTGATCGGCTTGACCGCCTT
ACCTCAGGGGTGCTTATGTTTGCCAAGACAGCTGCAGTCTNTGAGAGAATTCAGGAGCAG
GTTCCGGGACCGGCAGCTGGAGAAGGAGTACGTGTGCCGGGTGGAAGGGGAGTTCCCCACT
GAGGAAGTGACCTGTAAAGAACCCATCTTAGTGGTGTCTTACAAAGTAGGGGTGTGCCGT
GTAGATCCCCGGGGCAAGCCCTGTGAGACAGTGTTCCAGAGGCTAAGCTACAATGGCCAG
TCCAGTGTGGTACGGTGCCGGCCACTCACAGGCCGCACACACCAGATTCCAGTCCACCTT
CAGTTCTTGGGCCATCCATTCTCAACGACCCCATCTACAACCTCAGTTGCCTTGGGGTCC
TTCTCGAGGCCGGGGCGGCTACATTCCCAAGACAAACGAGGAGTTGCTACGGGACCTGG

Sequence 994

ACGCGTCCGCGACCGCTGGGCATGCGGGTGTTGGCGCGGTATCCCCGCCCTGCCAGCAT
CTGCCCCACGTTTCTTCAAGGCTAACTACCGGGATCCCGGGCTTCTTCTAAAGTAAAC
TCGCTCCGGAAGGCCAACAGTCCAGCGGCCAGACGGGCACCTGGGAACGCGGGCCTAAC
GCGTACTGGAGACGGAGTGGCGCCCGGCACTGCGCGCCTCCTCCCCGCCGGGAGACTGCG
TGCTAAGCTCAGCAAAGCCCCGCTGTGGAGACGGAGCCATGTCGCCCATTAACCTAATGAA
ACTGAGAAGGGAGACTCAGTCTCTCTTAGCCCCGAGCGCAAGCTCTGCTGGACTTGGC
ATCGTCCGCCCTCCACGATCCACACTCCGGGTTTTCCCATTCAGCTCGGCTGCAAC
CGAGAGACAGACGGAAGAAAC

Sequence 995

TABLE 1
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TCCTCCTGGCCCTGTTAATGTCTGGGGCCNGGCCGGGGGAGGATGGCGCCCTAGAACCCGG
CCTTGCTGGGGTAGGGGCGGAGGGGACGGGGTGGGGACCGGCCATGTCTGGAGGTGACCC
GGAGTCTGCTGCAGCGCTGGGGCGCCAGTTNTAGGAGAGGCGCONNACTTCGACTCTTGG
GGCCAGCTGGTGGAGGCGATAGACGAGTATCAGATATTAGCAAGACATCTACAAAAGGAG
GCCCAAGCTCAACACAATAATTCTGAATTCACAGAAGAACAAAAGAAAACCATAGGCAAA
ATTGCAACATGCTTGAAT

Sequence 996

CGCGTCCGGCCTGAGCCGGCGGGTCCCCTGTGTCCGCCGCGGCTGTCGTCCCCCGCTCCC
GCCACTTCCGGGGTTCGAGTCCCGGGCATGGAGCCGCGACCGTGAGGCGCCGCTGGACCC
GGGACGACCTGCCAGTCCGGCCGCCGCCACGTCCCGGTCTGTGTCCACGCCTGCAG
CTGGAATGGAGGCTCTCTGGACCCTTTAGAAGGCACCCCTGCCCTCCTGAGGTCAGCTGA
GCGGTTAATGCGGAAGGTTAAGAACTGCGCCTGGACAAGGAGAACACCGGAAGTTGGAG
AAGCTTCTCGCTGAATTCGAGGGGGCTGAGAGGATGGCCACCACCGGGACCCCAACGGC
CGACCGAGGCGACGCGAGCCGCCACAGATGACCCGGCCGCCCGCTTTTCAGGTGCAGAAGCA
CTCGTGGGACGGGCTCCGGAGCATCATCCACGGCAGCCGCAAGTACTCGGGCCTTATTGT
CAACAAGGCGCCCCACGACTTTCAAG

Sequence 997

GTCCGGCCAGGAGCCAGGCCGAGCGGGAGCTGACCANGGCTTGACTCGGGTACAGAACGA
GGCACCAGTCCCCTTGCGAACC GAAGGGCCTCGCAGTGGATGGAGGAGGCCAGCCCTGA
GGTCAACGCCAACCAGGCTAGCCTGGCAGCGGGCCTACAGGGTGGGTAGGCGGGCGTGCC
GCAGCCGTCCAGGGCCTTCCCTCAGGTCCCGGGCCGAGGGGCTACGCTGCGGCCCGCA
ACAAGGCCCGACTCGGCCCTCGGGACCAGAGCCCCACCGATCGGAAGGCGGATCCTTT
ACCAGGGCCATAGGCCAGTGAATGGGCGGGCCCTTNGGGCCTCCATTGCGGGCCCGGA
CTANGGAACNAGGCCCGNNGAGGGCCCTTGGCCTACCAGACCCTTTNTNANGCCGACA
GCCGNCANGGAAAGAT

Sequence 998

CGTCCGGCCAGAGCCCGCAGCACGCCGCCGCCGAGCCTAGGTACCTCCAGCATCTAG
CACAACGTCTGCAATGGAACAGGCGAGCTGTGAATATTTGTGGAATGCATGGGTGGACTA
AAGACCTATCACCTCACTCTAGAATGCCAGCATGTTGGAGCATGAGGACCAAGAACCAT
GGTGTTCCTCCACTCATCAGAGCCGTATCATTTTGATGCATGCGCCAAGAAAGAAAATTC
AATCATCAGACTGAAGCAATCAAACCTCAAATGGTGCTGTAAACTGAACCACACATAGAC
ATGCCATTCTTCTAAGGACCCTTAAGATCCACCCAGGAGGAGCGCTAGCTGCTGTTCCC
CATTGATGCCCTTTTCGGCCCCGGAAGTAGCCGGAAGATTGCCCCGCCAAAATCCCC
TAACCAGCAAGTTAGGTGTGGCATCTTCCACAAGCANGGAGCCGTTGTAGGAAAAAGNG
GTCTTGGGGAAGGTTTTTCG

Sequence 999

CCCGCGCCGCGAGTTTCNATGGTGTGTAATAATTTGAGAAAATGAATGTGTATACATACA
AGAGTAAGTCAGATTGTTAGACTCATCCCTCAGTATTCATATGTTTTGTGACTGATTTT
ACAGTTCTCTACCTTTCTCATTTACAAAAAAGAAAAGAAAATTTGATTCAGC
AATTCCTAAAAGTATTGTATTCAGTGACATCTTTGGAACACCAAGTTTCTGTTATCACT
TCAAATAATAGTCAAGTTTTATGTATGATCTAAAGGGAAAACAAGTTTGTTTTCAATCC
TGTGATAATTTTTCTTTAGAAATGAGGTGTTGCAAGAAATGGAATAAAAAAACCCT
CTGTAACAATTTTGCTGTGCTTCTTTGATTTTCTCTGTTTTGTTAATGGGTACCTTA
TATTTGTACCTTTACATATTGAATTCATGAGGAGAGGTTATGCACAGCCTAGTTATTTGA
CATTCCAGGGGGTTTAAAAAAA

Sequence 1000

CCCGCGTCCGGCGGTGGCGGTGGTGGCGGTGGCGGCGGTGGCGGCGGCGGCGGAAGGGGGC
GGAGAGGAAGGAGCGCGGCGGGACCGGGCCGGGACAGCGCGTACTTTGGGCTCCGGGAGT
CGCTCCGCGCCCGCGGTTGTAGCAGCTGCCGCTGCAGCCATAGCAGCAGGTGAGTCATTG
GCACCATGAACTGGAATAAAGGTGGTCCTGGCACTAAGCGAGGATTTGGCTTTGGAGGTT
TTGCCATCAGTGCTGGGAAAAAGGAGGAACCCAACTCCCACAGCAGTCCCACAGTGCCT

TTGGGGGCAACCAAGCTCTTCTTCTGGATTTTGGAAAGTCAAGCTCCACCACCAAGCTTGCTTCTTCTTCTACAAAATTGGATCTAAGCGGGCCAACTTTGATGAAGAAAATGCCTATTTTGAAGATG
AGGAAGAAGATTCTAGCAACGTTTGATTTACCTTACATTCTGTCT
Sequence 1001
CCGGCCGCGCCGCGCCGCCCCGCGCCACCGCCTGGGGGTTGGTTGAGGCGGACGGCGGGG
TCCGGGCGCGAGTACGTCTGTTCCCGCTGCGCTAGGGGAAGCGGGCAGTCAGAAAAATGGG
TAAGAAGAGTTCAGTAAAAACTCAGAAATCTGGCACTGGTGCTACAGCAACTGTGTACC
AAAGGAAATCTTGAACCTGACCACTGAGCTGCTGCAGAAATGCAGCAGTCCGGCGCCTGG
CCAGGAAGAGTGGGAAGAGTATGTGCAGATCCGGACTCTGGTTGAGAAAATACGAAAAAG
CAAAAAGGTCTTGTCCGTTACTTTTGATGGAAAAAGAGAAGATTACTTTCTGATCTAAT
GAAATGGGCCTCTGAAAATGGGGCTTCTGTGCGAGGGTTTTTGAATGGGTTAACTTCAA
GAAGAGGGGCTTTTG
Sequence 1002
GTCGACCACGCGTCCGACGCACCAAAGGGCAAATACTCGGTAGCGACTCAGAGGGAAAGT
GGGGTCTCTCCTGGGAGAGCAGGAGGCTGCCAGAAAAGAACTCAGGTCAGGGGTGCATAG
GCGGCTGAGGAGTGCGGGACGGGCTGAGAGTTGGGGTGCTCCCCGCCCGCAGGTGGGTC
CGCAGATCCCGCGGGCCGCATTGGCCCGGCTGCTGCGGGATGCCGAGGGGCTGCAGGAGC
TGCACTGGCGCCGTGTACGAATGGCTGTGACGAGGACCTGGTGCCGGTGCTGGCGC
GGAATCCGCAGCTGCGGGAGTGTTGGCGTTGGGCGGCTGCGGGCAACTGAGTCGCCGGG
GCTTGGGGCTTTGGCCGAGGGCTTGCCACGCCTGCAGCGCCTGT
Sequence 1003
CGCGTCCGCTTTNCTTCTTGGTTCCACCTCAAACATCCCTTCCGAAGTGAGGCTTTCCC
TGACTGGGGAGCATAAAGTAGCATCTCTCACATNCCATACACCCCTACAACGAATCTATG
CAATGGCCCTGCTCTGCCATCGCCACCTGAAACCATCTCAATAAACACATTTTGATAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGG
Sequence 1004
ACGCGTCCGTTGGCTGCGAGGAGCGCCCCGAAAGGTCAGAGGAAGGAGCTGTGGGAAGCTC
GCAGCAGGTATCGGAGCTTAAGCCAGTGGATTTGGGGGCCCTGGGCTCCCTAGCCGGCTG
CGGTGTGAGAATGGAGTGGGCAAGGAGCAGCGGGACTTTCAGGGCTCTGGGTTTGCAGA
GAGCCGAAATGACCATGACTGCCAACAAAGAAATCCAGCATACCCACCGAGCTGGTGCA
CTAAAGCCCCCTCGGGGGACTCTGAGCAGGTCTCAGTCAGTCTCTCCACCTCCAGTTCTCT
CCCCACCAAGGAGTCCCATCTACCCGCTCAGTGATAGTAAACCTCAGCTGGAGGTACC
CCAGCCACTCCAGCTCCCGGGGTGCTCCTTAAGGGACCGGCACCCCCCACT
Sequence 1005
NCCACGCGTCCGGCAGCGCTGCGACGGGACCGCGCGATTCTCTCCACGCATCTGGCCC
GCGTTCCTGGGCCTCGGCACCGGATCCCGCGCGGGGTGTGGACCCAGGGCCCACTCTCCC
CGGCGCGGCCAGGGCCCCCAGCGTGCGAGCGCCTAGGGGATGCCGAGCTGCTCAAGATG
AGGAGGTGCGCGGGGCGGGGCGGAGCAGTCGCAGTTCGCCGCTGTGAGCCCCACCCA
TCCCTGGCGCCAGCGCTTTCGACCACTCGGGTTGCGCTATGCGGGAGCCGNGAGGAGG
AGGCTTGCAGTCGTGGACCTGAGACCTCGGGAGGTGATGCTGTCTTGCTTTAAGTGGCT
TNGGGGAAAGTGAAAGAAAACNCCNAAAATTGGAGGACTTTGCTACCAGGGACCTAACGG
CACCAGTGG
Sequence 1006
ACCACGCGTCCGGGAAAAGCCCCGGAAGTGCCACGGGACTTCTGTCTAAGGAAGAGCCTC
GTGAAGCTCTCTCCAGTGGGGAGTCAAGTGGCCTTCGTTGTATCTGCCCCGCTTGTCCACCT
CCTAGAGTGAATCCCTGCGCTGGAGCTGGGACACTAACCAAGAAGTGGCACATGGCATAT
CACGGGAGCAATGTTGCCGTGTACGGAGAGTGCTGACCGAGGGGAGCTGGGAGCAGGT
ACTGCCTCCATCTGANGCCGCTCCTTTGAAGGGAGAAGCTCGGTGAGGTTCGAGGAGCCN
GCGAGAACTGTGCACCTCCTCGGGAGGAGAGCCCCCTCGGTGCTGCTTTCCCCCTCCC
TTCAATATGCTGGGGGCGGAGACCCTGGCCTCCAAAGTGCAATTCCGGGACCCCAAATCC
CAGCGGACGCACCAGGCTTTAGGTGGGCGTCAAGTTGNTGTGTGCCCCCTGGCTTCTACA

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CCCCGGGACCCCCTTCGG

Sequence 1007

TCGCCACGCGTCCGGAAAAATTTATGCCTTTTTATTTCATAACCCAGCTGTGGACCACTGC
CTGAAAGGTTTTGTACAGATGCATGCCACAGTAGATGTCCACATAATAAAATTCATAGTTA
CCAATGCAGTTTTGATATATCATTGGATTCTGTCTTTGAGTTGTAGGTTATTTCTTAGCT
GCATGTTTTAAACTGAATTTGCATAGAGTTGTATGTTAATGTTTCAGTTAAGAGAAAAAC
TTAAGATACATGAGTCATTACATAATGGGTATGAAATCTTTATAATCACCTTCCACCCT
CTATGGTGTGAGTACACATCACGTGTCATAGATACTTAAATGTAAATGTTAACACTTTT
CCTTCCTGCTGAGGATGTTTAGAGCCTAGTGCCAGACCCATTCAATTCCTTTGATT

Sequence 1008

GCGTCCGGGCGNGCGGAGTTTTGTCCATAACGTGGGCAACCGCGCAGCTGGAGGATGGCCT
CACTCGGGCCTGCCGCAGCTGGGGAGCAGGCGTCGGGGGCTGAGGCGGAGCCGGGGCCCCG
CGGGGCCCGCCGCGCCGCTCACCGTCTCTGTTGGGGCCCTGCTCCCCCTGCAGCGGG
AACCTCTCTACAACTGGCAGGCGACCAAGGCGTCGCTGAAGGAGCGCTTCGCTTCTCT
TCAACTCGGACTGCTGCGATGTGCGCTTCGTAAGTGGGCAAGTTGGCGNGCCGCCGCCG
CTGGGGGCCCGCAGCGCATCCCCGCCACCGCTTCGTGCTGGCGGCCGCGCAGACGCCGTC
TTTG

Sequence 1009

GCNCCCCGCGTCCGTTAGAGCTCAGGAAGTTATTAGGTGCAGCCTCTGGAGCCATACTCA
CGCTGCAGTGCATAATGGGAAATTAGGAGCATTAAAGAAATTTAGTAGTGTGTTGTA
AGGAAAATAAGCTACTTACTGAGATCTGTTTCTTCTATTGCATGTTTGCTTTTGAGGGAC
AGCTTCTGTCAAAAGTGAATCATCACCAAGGCTGGGCTGTTAGGAAGAATAGGGTTTT
ATTTACTTTTTATGTCAATTAACCTCAACAAAAGGCCACGCTGGCTGCTGTCATGCCAT
CTGGGTATGCATTAACATTAAATGATGATCAGCCTTGAGGTTCTATTTATCTTGATTTGG
CTTTATAAAGTTTGTGAGAATGGTGCTGGAGGNCAGAAAGTGCTAAGGAGAAAGAAGCTA
TGGGCCAAGTTAAAGAATTTGAATGCAAAGGCCAGGNATGGGAGTTTTTCATAA

Sequence 1010

CGCCNCGCGTCCGGTGAGCCCCAGCAAGGAGATCAAGATCGTGTCTGCCTGAGGAAGCAG
AGCCATGACAATCGGAAATCTACCAGCTCAATGTCCTGCATGTAGACTACCGGACCGTGA
GCAATCTGATTCTGACGGGCCACGGACGATTGTCATGGAAGTCATGGAGGAGTTAGAGT
GCTGAGCTCCTGGGCCTCCAGCCCTCCAGTGGCCTGTGGGTGAGGGAAGCCAGAATGAC
ACAAAGCAATGCAAAGACAAGATTGCCATGCAAATGGATGGTTTTGGACATACGAGTCTT
CTCCGCACATACATGTCTAAAGTTGAGTTTTATACACTGGAATGTGGAAGAACCCGGGTA
TCATATCTTTTTTAAAAATGTCCAGTGTAGAAAACATTTGGGAAAC

Sequence 1011

ATTTTTCTAACATGGGTTTGAACGCTTATAACCAGTTTTATAAACCCCTTGAACACTGCA
GTGAGTTATCAAAGCCACTGCCTGCAAAGTGGATGATTTAAGATTTTACACGCATGAAAA
TGAGTGTGCCATCTCCTGACCAGTGCTTTTGACTTAGGTACCCAGATGCCACTTGTGAG
CAGCAGGATACTTTTTACAACACGAAAGCATAATTATTTAGAAGAAGAGAGTAGAAGGG
CAGAATAGAATTCAACTTACAGAAGCACCGGAGTAGTGTTGTGGTTGGCTGTTATCTGTC
CCCCTGGGAGGAGGAGTGTGTTGCTCCCTTGTGTTNGATGTTAAACAGTAGCTTAAAGG
CTTTCCCCCATACCAACTTACAGNCAATGACAAAGAACCGGTGGNGGTTTTCAACAG
ATTCTACAAACATGCATTTTCCCTTCCCACTAAATGGG

Sequence 1012

GTCACCNCGCGTCCGCTCGTCCTCCGTGGGCACTGATGTCACCGAGGGCCCTGCTCACCC
AGCCCCCACACTAGGCTGTTCCATGCAAATGAGGAGGAGGAGCCAGAGAAGAAGGAGGT
ATCGGAGCTGCGCTCTGAGCTATGGGAGAAGGAAATGAAGCTTACAGACATCCGCTTGA
GGCCCTCAACTCTGCCACCAACTGGATCAGCTTCGGGAGACCATGCACAACATGCAGTT
GGAGGTGGACCTGCTGAAAGCAGAGAATGACCGACTGAAGGTAGCCCCAGGCCCTCATC
AGGCTCACTCCAGGGCAGGTCCCTGGATCATCTGCATTATCTTCCCCACGCCGCTCCCT
AGGCCTGGCACTACCCATTCTTCGGCCCCAGTCTTGACAGACACAGACCTGTCACCCAT

TABLE 1

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TGGATGGCATCAGTACTTTGTGGGTCCAAAGAGGGGAAGTGACCTTCGGGTGGGTGGTGA
AGG

Sequence 1013

CGCGTCCGAAGAAAATGGGATCCATGAAGAACAAGACCAAGAGCCACAGGATCTCTTTGC
AGGGGATGGTATGAATGCATATGTAGCCTACAAAGTTACAACACAGACAAGCTTACCATT
GTCTCAGAAGCAAACAGTTTTGCAGGTAAAAAGNAAAGATNTTAGTGACTTTCTTGGGT
CTTTATTGAGAAGCTTTCCNGAGNAAGCCACTCTCAGAAATTGGCTTCATATGTTCCCTC
CCGCCCCGGAGTAAGNAGCCCTCATAGNGGGATTGACATAAAAGTTGAAAAGNTTGNGG
AACGGAAAGAATTCNTTCTTTCTGGCAGNAATTTCTTTGAAAAAACNGAGGGGCCCG
CTTTAGAAAAAGGGTACCCTTTCAGGAGGGATTGTTAAAAATTCANTCCTACCCCATGGT
TTAACAAGGGACTCCTTGACNGTTTCAGTAAGTAGGTTTCTTTGNAAAAAAGGAAAGGAA
GCTGCCACCGTGCCCGTNGGGGATACCCNAAGACAATTGANGTTGGGTGGCTTGNTC
CTTNTCTCAAAGGAATGGTTTTCAAANCAAAAAGCCACCAAGATTGCCNGTCCANGCC
AAAAAT

Sequence 1014

GTGCCCCGCGTCCGCGGNCGCGTGGGGTGCTNGTCACCAGACTGCACCCTTGCCAGCAG
CTTCGCAGCTCTCGAAGTAANTTATCGCANGATGGCCGGCGCCTCACCTAGGAGAACCAG
GAAGGCAGGCCNCGCTAGAACGACGGNATTGAATTTTACTATTGNCAAAACAATCACATT
CAAATTCATTCCACTTAAACCTGAAAACATTGGACCACACAA

Sequence 1015

AGTCGACCACGCGTCCGGGCGGAGGGAGCGTGACTGCGCTGCGCAGGGCGCTAGGAGGCA
TTGTCGCCGCTCAGGCCCTTTTGTGAGAAGCAGACCAGCCTGGGGGCTGGCGGCAGGACA
CCTGTGTCTGCATGCTGAAGAAGATGGGTGAGGUCGTGGCCAGAGTAGCAAGGAAGGTCA
ACGAGACGGTGGAGAGCGGCTCTGACACTCTGGACCTGGCCGAGTGCAAGCTGGTCTCCT
TTCCCATTTGGCATCTACAAGTCTCGCGAATGTCTCTGGCCAGATCCACCTCATCACCC
TGGCTAACAACGAGCTTAAGTCCCTCACCAGCAAGTTCATGACCACATTGAGTCCCTG
GAGAGCTCCACCTGGAGGGGAACTTCTACACCGCCTCCCCAGCGAGGGTCAGTGCCCTG
CAGCACCTCAAGGCCATTGACCTGTCCCGGAAACCAAGTTCCAAGGACTTTTCT

Sequence 1016

CGCGTCCGCTTTTCAGTGAAGAAAAGGGAATTACACATNGAATCGACACATCAGTAATACC
GATACAGTGAAATGGGCCTCTAATAAGAATTTNAGCGNGTTTTCTGATGTGCCATTTTTT
TTGTCTTTTTTAAAAATATACCATANTTATAAAANTGGNAAATANNTTTTTGNACACCAT
TTAAATTGACCCCTTANAGNACNCTTGCCGTNATGNTGAAANGCTAGACCTATNGAAGC
TGNCCTGANGATATNTGTTTTTTAAAAAAATTTTTTACAACNTACTTGTTGAAAAATA
TAATATGCACTATAAAATATGATCNTATATCCTATTATCTATNATCTAAAAACACTTCCT
TGGACNCATTTANACGTAAATTAATAATGGGTCTTTAANGAAGANTAATGGGGAGGCC
CTTTTTTAAACCTATGGNNCAATCTTTTTATGNCAAGGGGNGGACCATTTTATTAATA

Sequence 1017

GCGTNCGCTGCGCCCGTGGGACCGGTGAAGTTCTGGCGACCCGGTACAGAGGGGCCAGGT
GTAAGCATCTCTGAAGAGAGACAAAGTCTGGCTGAAAACCTCTGGGACAACGGTTGTTTAC
AACCTTATGCTGCCCTTTCCATAGAGCAGCAGAGGCAGAAGCTGCCGGTATTCAAGCTT
AGGAATCATATTTTATACTTGATAGAAAATTATCAGACAGTGGTGATTGTTGGTGAAACA
GGATGTGGGAAGAGCACACAGATTCCCTCAGTACCTTGACAGAAGCCGGCTGGACAGCTGAA
GGAAGAGTGGTAGGAGTGACCCAGCCTCGAAGAGTGGCTGCTGTTACACATGATCTTTCT
TNCCAAAGGTTGCAGGGAGAGTAGCTGAAGAAAGGGGTGCAGTGCTGGGCCACCAGGTGG
GCTACTGCATCCGCT

Sequence 1018

AGTCGCCCCGCGTCCGGTGGGAATCTTTCNACTTCTTGATCCATCTGGGAGAGAAGACGT
ACCATTATGTGCCCGAATTCGAAAAGTGCCATAGCAGCTACCATCATCTATGCCTATG
CCTGGCTGGTTCCTCTTGCACTCTGGGGTTTCTCATGTGGAGAAACAGCAAAGTTATGA

TABLE 1
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ACATCGTCTCCTATTCATTTCTGGAGATTGTGTGTGTCTATGGATATTCCTCTTCATTT
ATATCCCCACCGCAATACTGTGGATTATCCCCAGAAAGCTGTTGTTGGATTCTAGT
Sequence 1019
GGAGTCGCCACGCGTCCGGTGGCACGATCTTGGCCCACTGCAAGCTCCGCCTCCCAGGTT
CACGCTATTCTCCCGCCTCGGGAGCTGGGACAACAGGTGCCCGCCACCACGCTCGGCTAA
TTTTTGTATTTTAGTACAGACGGAGTTTCACCGTGTGGCCAGGATGGTCTCGATCTC
CTGACCTCGTGATGCACCTGCCTTGACCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCA
CTGCGCCCGGCCAATAATTTTTTAGTTTAAGTTTCATTTTGTCCCCGCTGATGAAAGTT
ACAGCAGCTGCCAGTGCCTCTGTCCACACCCACCTCCCTGGTGTACTTGCCCCCTACAG
CAGCAGCCCAGATCCTCCCCTGGATTAATAATTGCAACTGGTGCCCTAACCCAAAACTTGA
GAAAAAATTCTCTATCACATCCACTCTTCTGGCATTGTAGAAATCTC

Sequence 1020

GTCCGGTNGATATATATATTTACCTCCTTAGTAATGCAAGAAGTGTGTTGTTGGAAGCAGA
GAAGCAAGCAACTGTATTTCTTGTCTCACCTAAGCATTACTGGAGGATAAGCCACATCA
GTCTACAAAGAGGTTTTATACAAACATAATAAGATGTAAATGGACCAAAAGTTGAAAG
CACATTCTTGCAAGTAAGCACCTGTTACTCTCCAAGCAACCATGGGTTTACCATATTTGG
GGATTTTTTGAACACTTAGNCACTTTCTTGCTCCCNAAAGGGGACNTTACAAAAAGTGNA
NACATTTTTGTANTGTNNCCCGTTATTAATAAAGCTAACNTTTGTAACTNCTTGTGTTT
CAAAAGGGCTTGGTNTTTTTGGACAAATTCAAAAATGGAAAAATGGATTTTCCACCGTTT
TAAGCCTCAATTTTAAGCCCCAAGGTTCCCAAAAATTTTTAANGAAAAAGTTATTTCGG
GTATTAGGTNGGNCCTGGGTTAAAAAACCAAGAANAACCATTNAAAACAAAGCCCAT
CAAAAATTCTTNTGGAAAAAAA

Sequence 1021

CAGGGAGTCGACCCCGCGTCCGAGCATCTTGGGGAATTTATATTCCTTTGTGAGAAATGT
TTTGATCATAGCCTAGAATGATAAGTAAAGAAATAAGATAATTCTACTGCTTGTCT
CACCCGGTTACAAAGCATGAGTTTGAAGACAATAAGTGCTTGTCCACATTTTGGCAGAG
ACAACAGTAAATACTCCAAATACGTTCTTTTCATGGTCAGTGTGAGCTTGATTTATGT
CGACATGAAGTTCGGTATGGCTGTTAAGGGAAGATGAGTGCTTTTATGCCCATAGTCTT
GTGGAAGTGAAGTCTGGATAATGCAAAATGAAACAGGTATCTCACATGATGCTATTGCT
CAAGAGTCTAAACGATATTGGCAGAATTTGGAAGCAAATGTACCTGGAGCGCAGGTCTTG
GTAATCAAATAATGC

Sequence 1022

CNCGCGTCCGCAAAGCAAACGACAGCTCAGGGGGCTCCAAAGACCTCATTATAGCAGCA
AAAGGAACTCAGGTAGTCAAAATATCAGTACACATGGGACGTGTCAGTTTAAACAGGAG
CCCCGGAAGAGTCATAGTCCCAGCAGTGACACATCAAACTAGCAGCTGAAAGGGACTTG
AATGTGACCATCAGTCTTAGTACTGATAGACCAAAGCAGCGATCACAGGCAGTAGCAAAC
GAGAGGGCACACCCTGCCAGCACAGCAGTGNCGAAGTCTGGGGAAGCCATGGCCTTAAAC
AAAATAAGACTCAGAGCAAAGAAGTCAATGCAATAAACACAAAGCCAATACGAGTCTT
CCTTTTCCTAAGTTCACTGTCAATTCAAATCGCTTAAGGAAGCAATCTATTAATGAGACA
CCTTTGGGAAGTTTGTCAAAGGATGATGGAGCTAGAGGGGCTCATGGGG

Sequence 1023

CNCGCGTCCGGCCAAACCGCCGAGGAGCAGTGCCCTATTCAGCACAGTGCGCCAGGGCCAC
TGGCAGATTGTTGATCTTTTACTACCCATGGAGCTGATGTCAACATGGCAGACAAGCAG
GGCCGCACTCCCCTGATGATGGCTGCTTCCGAAGGCCATCTAGGAACCGTGGACTTTCTG
CTTGACAAGGTGCCTCCATTGCTTATGGACAAAGAAGGATTGACAGCCCTCAGCTGG
GCTTGTGTTGAAGGGCCATCTCTCAGTAGTACGTTCTCTGGTGGATAACGGAGCTGCCACA
GACCATGCTGACAAGAATGGCCGTACCCCACTGGATCTGGCAGCTTTCTATGGCGATGCT
GAGGTGGTCCAGTTCCTGGTAGATCATGGGGCCATGATCGAGCACGTTGACTACAGTGGA
ATGCGCCCTTTGGATAGGGCAGTGGGGTG

Sequence 1024

GTGCCCCGCGTCCGAGAAGTCAGGGAGTGGAGGTTCTATAAGGAATTAAACAGCTGAGGA

TABLE 1
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CGGAAGGGTTTGTTCCTCCGTTTGAACCTAAACGCAAGTGGAAAAGAATACTCAGAATGTA
TTTTCTACTTTACATCTGCTGGGGAAGGAAATGTGTCAGGAAGCCGCTGCATCTGGTCA
TTTCATCGCATCAGAATCACAGCAGACGTGGAAGATTCCATGTGGTGGGGAATAAAGAAA
TAACTTTATGCTCTCCTGAAAAACAGCGGGAGCCTATGTGTGTGTGCGACACTGTAATCT
CAAGGAGATTCACTCAGAGCTGTCTCAGTCCAACCTCCTGCATGACCAGATCTTCCCTTAG
CATCTTTTCTGTGATGAAATATTATCTTGTGTTAGAGTTAGGAATAGGAACTAACCTGTA
GGAGCATGTCCCCAAATGGACATTTGAATGGACTAACAAAAACAACCTGGAAAGACTGAAT
TTCCGACACAAAGGAATGATGGGATCAAAAAGAAAGC

Sequence 1025

GGAGTCGACCCACGCGTCCGGTCGACAGCCTCCGCCACATCCTCCACCTCTCTTGGTCCA
GCGAGCGTTGCCGGGCCAGGGTCAAGCGGAGGGCTCCGACGGCGCGGACGGAGCGAAGCG
CCGAGCCATGGCGCACCAACGGGCATNACGCCACGGGAAGAAGCTGAAGGAATTCTTT
GCCAAGGCACGGGCTGGCTCTGTGCGGCTCATCAAGGTTGTGATTNGAGGACCGAGCAGT
NTCGTGCCTGGGTGCNCTTCGCAAGGGAGCCAGNTAAGGCNCGCTNGGGGATCAGGGACT
ATTGAACAGNGGCCCGTGGCTTGCNACCTGCNTGGGACCGCCCCAGGCAGGCCCTGCN
TACCTGGCTCTACCGCGCTTCGACTNACAAGAAATGGCTCAGGGGNCTTTCGAAATGGGG
CTTCTTTCCTTCGCCCTTGGTTCCGCNCTNGAATAAACCTCCCCCGTGGCGGCTTGAA
AGANTGCCTGTACCGCCGGGNAATGCNGGGCCCCACAAGTGGAAAAAGGGAAG

Sequence 1026

AGGGAGTCGACCCACGCGTCCGCTCCCGCCAGGCGCTTCTCGGACGCCTTGCCAGCGG
GCCGCCCGACCCCTGCACCATGGACCCCGCTCGCCCCCTGGGGCTGGNGATTCTGCTGC
TTTTCTGACGGAGGCTGCACTGGGCGATGCTGCTCAGGAGCCAACAGGAAATTAACCGC
GGAGATCTGTTCTCCTGCCCTAGGACTACGGACCCTGCCGGGCCCTACNTTCTCCGTTT
ACNTACTACGACAGGGTACACCGCAGTAGCNTGCTCGCCAGTNTCCTGTTACNGGNGGGC
CTGCNGAGGGGGCAACCGCCCAACCAATTTTCTTACACCCTGGGGNAGGGCTTGCCGAAC
GAATGCCTTGCTTGGGAGGGATTAGNAAAAAAGGTTTCCCCAAAAGTTTGCCCGGCTGG
CAAGGATGGAAGTGTTGGGACCGAACCAGGATGTGAAGGGGGGGTTCCACCAGAAAAA
AGGTTATTTTTCTTTAATCTTAAAGTTTCCANTGGAACATGGTNGAAAAAATTTCTT
TTTTNCGGGTGGGGGTGGTTCACCCGGGAAC

Sequence 1027

CGTCCGTAGTCTCTCTCGTGGCCCGGAAAAAAGAAAGAAGGTTGGGGCCAGTCACC
CCCACATCCCTTTATGGAGGCTTCCAGATCATGGATCCTGTCACGCGCATCCCGGTGAAG
AGAGTCCACCAACAGGCTTTGTATGGGGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTG
GTTGATATGGCTCACTGCAGCCTCAGCCTCCCTGGGATCAAGTGATCCTNTCACCTCAG
CCTCCCAAGTGGCAGGGACCGCAGGAAGGCCTGGACGACGGCCCGGACTTCCTCTCAGAA
GAGGACCGCGGACTTAAAGCAATAAA

Sequence 1028

CGCGTCCAACCCCTTCTCAGCCTGTGCGGAGCAGAGGGCAGTGGCGGTGGCCCCAAAGG
AGGGACCGCTGACAAAGGAGCCTCAGCCAACAGGAAAAAGGCTAAATCCACCCTTACCC
CTCCTGACCCCCCAAGTGGAGGGAACAGATCCTGGCCTGAGGGGTCTAGCCTGGAGCA
GGCGCCTGCGCCCAGACCCTGGAGAGCCTTGACCCAGAGCCTGTGCTGAGGTCCAGGGAG
TGTGGAGAGCTCCTGGTGTGAGGACTGAGACTGACAGGGGAGCCCCCTCCATCTGGCCC
CCTTCCCTTTCGCACTGTCCGCTTTGTGAGGCTCAGAGGAAGGACAGTCTGCAAGCCCG
CCTAGGAGGTCCATCCCCAGCAAATGTTTTGGAGGTCCCCCAGAGAGCAAAGTGGGCCA
TGGCAAGAAGTAGGGGGTGGTTGGACCTGTCACATGAAATGGATCAACACTTGAATGGG
GA

Sequence 1029

CGTCCGGAGAAGATGGGCCTCCCGGGCTCAGACTCACAGAAAGAGCTGGCCTGACCACCA
GGCACCTCACTGGCACTGCTGACCCATCCCAGAAACACAATCTCAGGGACCCGAGCAGCT
CCAAGGACGAGAGGATACAGCAGACACAACCTAATAGAGAGGGCGCCTGCAGCCTTAACC
TCCACGGCCTTCGATACTTATGCAAGCCTGGTGTGCTCCTGTCTCAGAGTCATCCTGC

TABLE 1
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GCTCATGCCTTTTCCCGAATGGGTTACCTCTGGCAGTTGCCGCTTCAGTCTTGGCCTTA
GCCTCATCTTGAAGTGGGTAGCTGGCGGGAGAGGGTGGGCTGCGCCCCCTGCTGGCCCTG
AGGCTGCAGAGTTGGGAGCAGGACACCTCACCTGAGTTTCATTTTTTTCATGTCCAAAC
CATGCACATACTATAGTCCAGAATCAAAGCACTTTTAAAA

Sequence 1030

CCCCCCGCTTTTTNNANNNCNCGGGGGGTGNGGCAAAACTTTTCTAGAAATTNGCGCC
ATGTTGAAAACNNTNTCNCAGCANCCCCGGCTGCACAGGGNGTAGCCCANCTCCAGGTCC
ACGGAGTGGTGTGGACCTCCACCTCACAGCTGCCTCTGGCAGCCAAGCCTCTTTTCGCC
CGGCCCCAGCCCCCTCTGGTTGATAAACGGGTGGGCCTCCTCAGCAGCGTGGCTGCCTTC
ACCTTGATTTCGCCAGGGCTCTCGGCAACATCGATAAACCAAGCCTCGCCACCAGCTGG
GCCCTCCCCACCCAGTCTGCCAGGCTGGGAGCTGGAGCTTGTGAGTCTTGAATGCCCT
TCTAGATGGCTTCTCTAGAGGCTCTCCTGGCAAGAGAGGGTCCCAAGGGGAGCCCTGCAA
AGCAAAGGCTCCTTGTCTGGGGCGGGATAGAGAATCTCGCCTCTGTCTGGTGTGTACCT
ACTGGGGGCACAGGAACAATTTCTCAAGGAGACAGTGGCATGGAGCTTTGAAAGACGAA
GTANGTGTAGCAAGGAAATAAGGAGGAACGGGGTTACGGGCAGAGGAGAAAGCACATG
CCAAGTCAGCAAAGAAAAGTAGAATTCGAAAACTTTTTTA

Sequence 1031

GGCCAGAGCTACTACGCCGGCCGATGGCGAGGAGCCCCGCCCGGAGGCTGAGGCTCTGGC
CGCAGCCCGGGAGCGGAGCAGCCGGTTCTTGAGCGGCCTGGAGCTGGTGAAGCAGGGTGC
CGAGGCGCGCGTGTCCGTGGCCGCTTCCAGGGCCGCGCGCGGTGATCAAGCACCGCTT
CCCCAAGGGCTACCGGCACCCGGCGCTGGAGGCGCGGCTTGGCAGACGGCGGACGGTGCA
GGAGGCCCGGGCGCTCCTCCGCTGTGCGCCGCGCTGGAATATCTGCCCCAGTTGTCTTTT
TGTGGACTATGCTTCCAAGTCTTATATATGGAAGAAATTGAAGGCTCAGTGACTGTTTCG
AGATTATATTCAGTCCACTATGGAGACTGAAAAAATCCCCAGGGTCTCTCCAAGTTAGC
CAAGACAATTGGGCAGGTTTTGGCTCGAATGCACGATGAAGACCTCATTATGGTGATCT
CACCACCTCCAACATGCTNCTGAAACCCCCCTGGAACAAGCTGAACATTGTGCTTATAGA
CT

Sequence 1032

TCGCCCCGCGTCCGCAATTTCTTTGAATTCGATCACTTCTACATTCAGCTTGCCAC
ACTCTTTTTTGATGAAGTTGTGAAGCAGATGGTAGCTGCCTTTGAAAGAAGAGCATGTAA
GCTGTATGGTCCAGAAACAAATATACCTCGGGAGTTAATGCTTCATGAAGTCCATCACAC
ATAAAGGCAAAAAAGAACTGGTGCCACCTGCTTCTGACTTTAGTTTGTTCATTTTAGGA
AGTATTTTCATGACATGTTTTCAGAAGCCAGAAAGCATTGTAAACGCAGCTTTGGTTA
TAAACCTGCACCATTGAAAATTTGCACATAGAATATAGACTCACTTGTACATAGAATTAT
TTCTTCAAGTATAATTCAAATAATATGGACATTATCATGTTCTGCATTACAATAATGGG
ATGTCATCACCATTGCTAGAATACTGGCATGATTCTTCTGAGCAGAAGTTGAAACTGTAA
ATTTAAACCTTTTAATTATCACCTTACCT

Sequence 1033

NCGCGTCCGGCCTTTTGTTGAGCTTGCCGGGCAACCGGCCCTGCTGGGGACTACAAGTC
CCGTAAGCCTCCGCGGCGGCACGTCTACCTACACTGTCCAGCCGGCTCCCTTTTTCCC
CCTCCCCGGGGGCCAAGGGCTCCGGCTGCTGCCTGGCGGCCAACGGGCCAGGTAGGATTT
CCGGGAGAGGCTGCTGTGGAGGCTGAGGAGGCGGCGGCGGAGATCTGGAATGAATTTCT
ATCTGTGAAATTGTGAAGACGAAAAAAGAAATTTGTGCTAGTTTTGCTGTTGTACTCCAC
ATTGCAGAAGTTACAATCACAGTGCAAAAAACAGTATCTCACCTCCCTAACTGGTTAAT
AGTGGCATGGAAGATCCATTGAGGAAGCAGACCAGCCCACTACAGAGCCAGGCATGGTC
CTGGACAGTGTGGAAGCAGGAGACACAACACCTTCTACCAAAAGGAAGAGCAAGTTCTNA
GGCTTTGGCAAGATCTTTAAGCCCTGGAATGGAGGAAAAAAGTAGTGATAAATTT
A

Sequence 1034

CGTTTTNNTTCTTCCCTTGGATNAATATTTTCTACTGAAAAGAAATGAAATCTCAGTTCC
ACTATGATAAAAGAAACGAATCACCAGTGTCTGTGAGTCCCCCACTGCTCCTCCTCATA

TABLE 1

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CCAGCATTGACACTGGTAGCTGAGGAAGGGGACTGCTCAATTTCTAATGTGATCTATTCA
AGAAGCCACATATAAAAAAGGCATTGAGGGCTCACTGTCCAGAGAATTGCTTTTGTAATG
CTCCACAACGTATGGGCAAAAGTTTAAGGACTACTGCCTGATGTACCAGGAATCCTGAGT
TCTGTGAAAATCTGTTCAATCCAAATCTGTGAAGCATTTCCAAACATCCAGAGAATGGTT
TCACTGTTGAGGGTGCATGTGGCAGAATCTGTCTCTCTGACCTGTCTTCTGTTACCA
TCCCTGGACAGTGACAGATTTTAAGCCAGCCACCAGAATCTTTTCGAGTTAACCATTTCTAGTTTCTGTAAA

Sequence 1035

GTCCGACCACGCTCCGCTCTGACCGCCGCCGGCTTTCACCCACCTGCCCGGCTCATCACC
TCTGACTCCTGCGGGCCTTCCAGCCGGCGCTATCTCGAGCCCCGACCAGCTCGGCCTG
CTGTGCGGCATCTCTGCTGTCTCCGGCTGTAGGGCTACCTGCCTCCCTCCCGGGGGGTG
CACTGCGAGTCCGACTCTAGTGGGGGCGAGCGCTAGCGGACTCCCAAACCCGCTCAGGTC
CTGCCGGCCTCACCGGCACCGCCACCCCTCCAGCCGGCCGCGGCTCTGCGCTTGCGCGCC
GGCAGCACACAGTGTTAGGGGCGCGCCCTCTGCTCTGGACATGCGCCGCGCTCG

Sequence 1036

GTCCGCCCCGCTCCGGGAAAATGCCGCGAGTTTGTGCTTGAAACCTAAGAGCAATCCT
TGGTTTTGTGCTACATTATTTTCCAGACCAACACATCTACCAAGTNGAATTTTATNNA
CTTTAATTTCAATAAAGTTAGTAGAGTCACTCAACTTACAACTTTATTTATGNTGGC
TTTGGGCAAAAAAATCACTTATAAGGCAGCTCTAAATTTGCCTTGATAAGCTAAATAAT
TACTTTTATAACTTACTAAAGCAGAACAAACAGTGAACTTTCTAAAAATTTCTATNCTG
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ACCAGGATATTTTTATGGTTTTTTTTAATTTTTCTCCAAAGNAATTATTTTTAATAGG
AATCCCAAAAGNAATCAAGAAATTAGTTTTTCAAAAATAAATTTTTTCCAGNTNGATAA
AAAGGAAGGTNGTTTGTAATAATTAATCCATTATTTACCACCTTAAAAAATTTGGGGGG
AATACCATTCTAAAGGGAACCTTTAATTTCTTACCTAATTCANGNTAGGGNGTCTTGG
CAATTTNGAATANTTTTCNTTT

Sequence 1037

GCGTCCGAAAATATTTAGGTAATGTCATAAAATTTATTTTACCTTTCTCATTTTCTGAGA
AAATAAATGAAAAAAACCCTAGATATTGCTTTATTACCAACAGTGTGTAGGTTTTGTAC
ATATGGAAATTTGACACAAAAAATAGGGAATTTGTATAGAGAAGTTTCCCTCTTATAAA
AGGACTCCCATTTGATTGTTGAAACTATAAAATGCACTTTTACTTTACCATATCTTGAA
ATGACAAAATATCGCCCTTTGAAAACCTGACTCTTGCACCGTTGTAAATCCCAGAGT
CTACCTCAGTTAACAGGCCTTAGTTTTAGGCAAGGAATGAATTGAATTAATAATTTAGT
TCAATCATTTTATGCCAGAATTTGTTTTCTTTTAAAGGCACCATCCTTCCCTCCTTGG
CTGGNTGGCCCTTCCCTCCCATTTAACTTTCTTTTTTAATNCTTTGAAAAATTGGGT
TTAAAAATATTTCCAATCCTTTTCTTTTCTCTAGCCAAAGTNGGTTTTGTNATTTN
AAATAAAAGGGCCCTCTGGTGAAAAANGGNGCTGAAATTAACCTT

Sequence 1038

CGCCNCGCGTCCGCAAGACTTTGAAAAATNNGATCATGGTTCTTCTCAAATACCAGCAT
GTCTAGCATCTATCAGAATTGTGCAATGGAGGTTTTGATGTCCAGTTGTTACAGTGTAG
AGCTTGTGGAGCTTTAGTTTATGATGAAGAAATTATGGCTGGATGGACAGCAGATGACTC
AAATTTGAATACAGCTTGTCATTCTGTAAAAGCAACTTCTTGCTCTTCTCAATATAGA
ATTCAAAGATTTGAGAGGTTCTGCAAGCTTTTCTGAAACCAAGTACCTCTGGTGACAG
TTTACAAAGTGGAAGCATTCCATTGGCAAATGAATCCTTGGAGCACAAACCTGTATCCAG
TTTAGCAGAACCTGACTTGATCAACTTTATGGACTTCCCAAAACATAACCAGGATCATAA
CTGAAGAAACAGGCTCTTGCAAGTTGACCCAAGTGATGAAATAAAGAGAGCCAGTGGGAGA
TGTCCAAACTATTGAAAATTTATCTGTGNCTTAATAGGTTTATC

Sequence 1039

TGANATTAGCATCACTTCGTCTACTAAGAATCTTAATAGATGTAAAAATATCTTTTAAAA
CATATGGTAGGATGGGTAAAATTTGGCAATACTATCCAGGAAGTCACTAAGTACAGATGA
ACTGATTTAGTCCTAATTTCAAGAAGTGTGATTCCACCTACTTGACTAGAAATTTATACC

TABLE 1
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TGGTAATAACTCCTTGTCCTTGAAGATTTTCAACTAAGGAAAACCTGTTTTTCAGCAGGAC
CTGATTATGCACTGCTATCTAGGTAGGGTCACTTATGGTTTTATAATATATTTAATTGGA
TTATAATATTCCTTTTTCTTGTCTCTTGGACAAAATCCTAGCTTTACTGTAATTTAAAA
AGATGAGTTTAAAAATTTTCAGGCTTTAAAAACATACCAAACATTGATAAAAATGAAATCTA
GATAAAAGTATTTTATCAATGTTTCAGTTGCCTGGATTCAATAACTGTATTATGGTTATGT
AAGGATAATATCTTAGGAAATCACATTATGGTATTAA

Sequence 1040

GTCGACCCCGCGTCCGGTAGCTTAGTTGAGTAGATAATCTTTTGTTGTTTCCTCCTTGTA
ATATACAAGCCTTGGCTTCTGTGACATCATACTCTCCTAGATTTCCCCCTGTCAGTGTGG
CTTCTTCTCAGTCTCTGTCCATCCCTGGTGCTCCTGAAGGTTCTGTTCTCAGCCTTACAC
ACATTACCTGGGTGATCTCATTCTCTGCCATGACTTCACTTGCCATATATGTGCTGATTT
TCCCCAAATTCCTATTTCTCCCGACCTTTACATCTATTTTATTTGCAGGTCATATATCTA
ATAAGGAATTGATATCCAGTGATCATGTAGAATCCTGTAATCAATACAGAAACCAAAC
AGTCCAATTAATAAATGGAGAAGAGATTTGAATGAACATTTTTCTAAAGAACATCTCAAG
CTCAAGATTTCCAGATAACTTTTCTTTCTTCAAATCTGCTTCTGTGTTTCCTCATCTG
TAGGTGGCACAGCATACATCTGATTTCCCAAGCCAGAAACCTCATAGTTATTCTTGACTC
CAGGAAGAAATATTATTGAGTTTTTAAAAACTC

Sequence 1041

CGACCCCGCGTCCGTGCTGAACTGAGCTCAGGTGTGTTTTCTTCCAAGCTTTCTAGCAA
GGTTTCTACTTAAAATCACCTGTGTGCAAGCCCAAAGGACATTTTCATCTATTCTAAGCAG
AAAGGCTGTTTTGTTTCATTACAGTGAGTGCTGTTTCATCTCATGGAGTGGGAGGAGCACTA
AACCAGGAGACAGAGGACATGGATTTGGTTTCCAGCTTAACCAGTTAGGACTCTGTCCTC
TGCATTCTGGAACCATGATGCCTGCCTGCCTCACAGGGCTGTTGTGAGGACCAGAT
GAGATGATGTATGTTTCATACCTTTTGAATCTCTAATTTAAAGTCTTAATATTTTGTCTTC
TGAGTGTGAGGGGATAAACCTGGATGTAGACTATTAAGCAGCATAGGAGAAAAGAACAAAT
AGAATCTAATGGACTGGGTTTGAATCTCTCTCTAATGCACTGCTTCAGACAAAGTGAA
ATCCAAAGGTGTGAAAAAGTATAGCTGCAAATTTGAAAAATGTGTTTCAAGAGT

Sequence 1042

AGTCGACCACGCGTCCGCTCTGACCGCCGCGGCTTTACCACCTGCCCGGCTCATCACC
TCTGACTCCTGCGGGCCTTCCAGCCGGCGCTATCTCGCAGCCCCCGACCAGCTCGGCCTG
CTGTCCGGGCATCTCTGCTGTCTCCTCCGCTGTAGGGCTACCTGCTCCCTCCCGGGGGGTGC
ACTGCGAGTCCGACTCTAGTGGGGGCAGCGCCTAGCGGACTCCCAAACCCGCTCAGGTCC
TGCCGGCCTCACCGGCACCGCCACCTCCAGCCGGCCGCGGCTCTGCGCTTGCGCGCCG
GCAGCACACAAGTGTTAGGGGCGCGCCCTCTGCTCTGGACATGCGCGCGCTCGCGAGCGT
CTCTGGGACCGGAAGTGCGGGCGAGCGCGGNTCCCCGGGTCTGACAGGAGCAAGCTGTGG
GCACCGNNGGCGGTAGTTGGAGGCGGNAGAGGGTNCGTAGCCGNGCCGNCTGCCCGNCATG
GGCCTNC

Sequence 1043

AGTCGACCCCGCTCCGCAGGGGCGTGTTGGCCCCGCACAGATTGAGCCGAGTTGTGCGC
CCGCTGGGAGAAGTGACCTCCTGCGCCTGAAAAGAAATTTCAATTCATATAGGTGACT
ATGCAGCCTGCAATTCAAGTATGGTTTGGAGAAGATCTGCCTCTAAGTCCTCGGAGTCCT
CTGACTCCAGACACGGACAGGATTGGCTAATGTTTGTGAGTACGATGAGTGGATAGCT
GTGAGGCATGAAGCCACTTTGTTGCCATGCAAGAAGATCTGTCAATCTGGTTATCTGGT
TTATTAGGTATTAAGTTAAGGCAGAAAAATTATTGGAAGAAGTTGATAATGGAGTACTA
TTATGTCAACTGATTGATGTTCTTCAAACATGGTGAAAACATGCAACTCTGAAGAATCA
GGGAATTTTCCAATGAGAAAAGTGCCCTGTAAGAAAGATGCTGCATCAGGTTTCATTCTTT
GCTCGGGACAATACCCGCAAACCTTCTTCACTGGTGTAGGGACATTGGGGTTGATGAAAC
TTA

Sequence 1044

ACGCGTCCGCCCACGCGTCCGGAGTCCTCCTCCCCGGGTGCCTGCCCGCAGCCCGCTCGG
CCCAGAGGGTGGGCGCGGGGCTGCCTCTACCGGCTGGCGGCTGTAACCTCAGCGACCTTGG

TABLE 1
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CCCGAAGGCTCTAGCAAGGACCCACCGACCCAGCCGCGGCGGCGGACTTTGCCCGGTG
TGTGGGGCGGAGCGGACTGCGTGTCCGCGGACGGGCAGCGAAGATGTTAGCCTTCGCTGC
AGGACCGTGGTGAAGCCTCTGGGCTTCTCTGAAGCCCTTCTCCTTGATGAAGGCTTCCAGC
CCGCTTCAAGGCACACCAGGATGCACTTGCCACGGNTTGCCGTGCCCCCTNTTCAGCAGT
CCCT

Sequence 1045

GTCCGCAGAATTGACNAATTCAGGAGGTGTAAAAATAAACAGTGTTCTTCTCTACCCC
AAAGCCACTACTGACCAAGGTCTCTTCAGTGCACTCGCTCCCTCTCTGGCTAAGGCATGC
ATTAGCCACTACACAAGTCATTAGTGAAAGTGGTCTTTTATGCCTCCCAGCAGACAGACA
TCAAGGATGAGTTAACCAGGAGACTACTCCTGTNACTGTGGAGCTCTGGAAGGCTTGGTG
GGAGTGAATTTGCCACACCTTACAATTGTGGCAGGATCCAGAAGAGCCTGTCTTTTAT
ATCCATTCTTGATGTATTGGCCTTNNCCACCGATTTATTACGGTGCCACGCANTCAT
G

Sequence 1046

ACCACGCGTCCGCCCACGCGTCCGGGCGGGGGCATGGACTACTGACCCATGCGGGGCAGC
GTCCCTGTGACCTGGCCGATGAGGAAGTACTGAGCCTGTTGGAGGAACTGGCCCCGAAAC
AGGAGGACCTTCGGAACCAAAAAGAAGCTTCCAGAGCCGGGGCCAGAGCCCCAAGCGCC
CTCTAGCAGCAAACACAGAAGGAGCTCTGTGTGTCGTCTGAGCAGTCGCGAGAAGATTTCT
CCTCCAGGACTTGTCCAAGGAGCGCGGCCCTGGTGGGGCTGGGGGGCCCCCATCCAGGA
CGAGGATGAGGGGGAAGAAGGTCCACCCGAACACCCCTGCAGAACCCAGAACCTCAA
TGGCGTCTCCTCCCCGCCGACCCAGCCCTAAGAGTCCCGTGCAGCTTGAAGAGGCCCC
CTTCTCCAGGCGCTTTGGCCTCCTGAAGACAGGGAGTTCTGGTGCCCTGGGTCCCCCTGA
AAGGCGGACAGCGGAGGGAGCCCCCTGGGCTGGGCTTGAACGCTCGGCTTTCTTCTCCT
GGCTGGAAGGGACCTTCACTTANGCCAAGGAGCTTCGTNTTGGCAGAATTACCCCGACCC
CCTTCCCGAAGCTTGCCGAGCCCTTNTGTCTTGTCTGAGGGTCACCAAGCCTTCTTCC
TTTGCTTGGGAGAACTTCTTGNCTTNCCTTCAGGAATTCNGAGCCTGGATTCCAGCG
AANCCNAACGTTCCACAGGCTTTCACGGGGC

Sequence 1047

TGTCGACCCACGCGTCCGCTCCCCGCCGAGGCCTCCTGCACCACTAGAGCCCCACCCCC
GACCCACCCCGGGAGGGCAGAGCCAGAAGAAGGCTCATTAGACCTGGGGGACCCAAAGG
GTCTGGCCTCTTTGGGCAGCCCCAGAGATGAGGGGTGAGCAGAGGAGAGCTCTGGGGTTG
GGGATGGGTTAGGGACGCAAGCTTGAGTTCTAGCCCTTGCTCTCATTAGCTGTTGTGTG
ACCCTGGGTAAGACCTTCTTGTGTTGACCTCAGCTTCCCATCTGTTAATGGTGGCT
TTGGCCAAGGCAATCCACAAACGTCAAAATTCCTTCCCATCAGTACACACACCGATGC
ACACACACTCTCTCTTCTCTCTCTCTCTCTCTCACACACACACACACACACAC
ACACACACACACTAGTTAGTGCTTGGATGAGGCGGGGCAGTGTGTATATGGACCCCT
GGACTTGCTACCTTCAGGGTCCATACTCGTCCCTCCCTCCTGGCTCTGCTGTCTGGAG
TCTGGCAAGCGGG

Sequence 1048

CGCGTCCGCCACGCGTCCGCCGNCCGCCGCTGCCTGGGCCGGGCCCGAGGATGCGGCGC
AGCGCCTCGGCGGCCAGGCTTGCTCCCTCCGGCACGCCTGCTAACTTCCCCCGGTACGT
CCCCGTTCCGCCCGCGGCCGCCCGTCTCQCCGCGCCCTACGGTCGGGTCTCCAGGAG
CGCCAGGCGCTGNCGCCGTGTGCCNTCCGCCGNTCGCCGCGCGCCGCGCTNCCCGCCT
GCGCCAGCGCCCCGCGCCCGCCAGTCCTCGGGCGGTCATGCTGCCCTCTGCCTCG
TGGCCGACCTGCTGNTGGCCGCCGGGCCCGGGCCGAGCCTGGG

Sequence 1049

NCCACGCGTCCGCAAGGCGCTACGTTTATTGCCTCGTCTTATTCACTGACCTTTGTAATG
ATACACAGTGAATTTCTTTTGACAAAGAGAAATGCAGTGTAGTATGCAGAGCTGCTGTTT
TAATGCCTATGCATTTACTCTTTCCTGATTTAGGCAGAGGTGGCATTTTCTTTATTGCAT
TTCTCTATTTTTTAATGTACCCTACCTTCAGTATTCTTTGTAAGTTGGTGACTTGCA
TCTGTGGCCTTGAATATTTTATTATCACATGTGGCATAACAGTATCCACACTTTTTAGTT

TABLE 1

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CTTTATTTTTTTTTTTTTATTTTGAGCAATTCTCCTGCCTCAGCCTCCCAAATAGCTGGG
ATTACAGGGTGCATGCCACCACACCCAGCTAATT

Sequence 1050

CGCCCCGCGTCCGGGATGGACAAGACAAATCTCTTGTAATAAAAAATTACAAGTAATTTTT
ATAGAAGCTCTGCCCTGAGGGAGGGGGAGCGTGACTTCTCACTCCTTCAGTGTGGGCTGC
ACAAGTGACTTCCTTCCATATGGGATCGTTATAACAAAAGACTGTAACAAGGGCTATGGG
AGTTATAAGACAGGAATTGTGGACAAAAACCAGTGTATATCATAACATCACACCTTGTA
TGTTGGCAGTACAGTCACTGACCTTTGATAAATGTTGATGACATGTTGAGTAAAGGAATG
AGAGAAAGAGGATTGTTTATCTCTGTTTTATCCTTCTCAGAGAACTTAGAGTAACAAG
GTGTGTTATCAGCCATGCTGATGCCTTTGGTAAACTATTGTGTGANATNGGGTGTTTGA
ATTGGTCAAGTAGAACTGGGGCTGCCAGGCGCAGCCGGTAAGCATTTNCATGTGAGCCT
TAGGGAANAAGTGCATTTTGGTAGGAGCCATCAAAAATAGCTTCTTGATATTTCAATAAA
AG

Sequence 1051

GACCACGCGTCCGGGGCTCCTGGGTGTGCCGCGGCCTCTGGCGCGCAGCGACTCAGAGA
ACGTCTACGAGGTCTCCAGGACTTGACGTCCCGCCGCGGAGGAGAGCGCAGAGCAGG
TGGACGACCCACCGGAGCCCGTGTACGCGAACATAGAGAGGCAGCCCCGGGCCACTTCAC
CGGGCGCCGCTGCAGCCCCCTTCCCAGCCCGGTGTGGGAGACGCACACGGACGCGGGCA
CCGGGCGCCCTACTACTACAACCCAGACACGGGAGTTACCACCTGGGAGTCGCCCTTTG
AGGCTGCCGAGGGTGCCGTACGCCAGCCACCTCCCCTGCCTCGGTGGACAGCCACGTGA
GCCTTGAGACCGAGTGGGGCCAGTACTGGGATGAGGAGAGCCGCAGGGTGTTCTTCTACA
ACCCGCTGACGGGCGAGACGGCCTGGGAGGACGAGGCCGAGAACGAGCCCGAGGAGGAGT
TGGAGATGCAGCCGGGCCTGAAGCCCTGGCAGCCAGGGGGACCCGNGGNCCC

Sequence 1052

CGGCTTTGCCGCAACATGCTCAATTCCCGATCATCGCTCAAAGTGCTAAATTTTCAGGAG
TGAAAAGAAAAAGGAAGGAAGAAACCCCTCTCAGGCAATCATGTACAGCCACCCGAAA
CAATGAAATGTAATACATTCTAAGACAAGTGAAAGAAGAGCATGGCAGACACACAGATG
CAACTGTGAAAGTTCCTTTCTTAAGAAATGCAAGGAAGCAGGACTTCTTAATTACTTAC
TTGAAGAAATATTAGACAAAGTTCATTCAATTCAGAAAACTCATGGATGAGACTACTT
CAGAATCAGACTATGAAGAAATCGGGAGTGCACTTTTTGACTGTAGATTGTTCTGAAGACA
CATTTGTAAATTTTCAAGCAGCAATAGAGAAAAAAATTCATGCATCTCAACAAAGGTGGC
AGCAGTTGAAGGAAGAGATTGAGCTACTTCAGGACTTAAACAAACCTTGTGCTCTTTTC
AAGAAAATAGGAGATCTTATGTCAAGTTCTACATCAATATCATCCCTGTCTTATTAGGGA
TTACCGTTTCCTAAGCCAAGAGTCATGTCAAATTGCAATCAGGC

Sequence 1053

GACCCCGCGTCCGGGAGGTTGAACGTTCAAGGCTAAGACCGTTACTGAATTGGTTACTAAG
AAGAAGCCAAAGGCTGAAGGCTATGCTGAGGGTGACCTCACTCTCTATCACCGTACCTCA
GTCACTGACTTCCTCCGAGCTGCCAACCTGTTGACTTCCTCTCCAAGGCCAGCGAAATC
ATGGTAGATGATGAAGAGTTGGCACAGCATCCAGCTACCACTGAGGACATACGGGTGTGC
TGTCAGGACATCAGAGTGTTGGGGCGCAAGGAGCTCAGGTCGCTACTAACTGGAGAACA
AACTTCGGCGATATGTGGCCAAGAAGCTGAAAGAACAAGCAAAGGCACTGGACATCAGC
CTCAGCTCTGGAGAGGAAGATGAAGGTGATGAGGAGGACTCAACAGCTGGAACCAAAAG
CAGCCCTCTAAGGAGGAGGAGGAAGAGGAGGAGGAGGAACAACCTGAACCAGACCTTGGCA
GAAATGAAGGCCCAGGANGTGGCGGAATTGAAGAGGA

Sequence 1054

GTGACCCCGCGTCCGCAAGGACCATGTTGTACCACAGCCTCTGCTGAGCTGAGGGACAC
ATGTCCTTGTTGAAGACCTGCACCCCTGGAACCTCCCACCATCATCACAACCTGNAGTCTC
ATTTGCAGTGGAGAAAAGAACCCGACGTCCCACAGCCAGATATACCCAGCTCCATGCC
AGCCCTTCATGTTTACCTTTTGCTTTGTTAATTACATGTCAGACTCCTAGAGGGCCTCCA
GACTAATAGGAAGCATTTCTGTAACCAACCTGCCACCCACTGATTAGAAATGGAAATCA
CATTCCACAATCTATGGCTTCCACCAGCTAGCCCAGGAAATACTTGAAATCAGCATTCTC

[illegible]

CCACGCGTCCGCTGTTCCCGACAGCATGGATTAGCTTCCGTGTTCTGAAGTTGTTCTTTT
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GTGTTTTGCCTTCTCAGGGACCAAAAATGTATCATTGACTCCTTAACAGTGACCTTCCTC
CCAAGGACATATCCGTGTTCATTTTTATAGGTTTTACTCATATTCATAGGTAGATTCTG
TTAATGTGAGTTGGAAAGAAAAGACCAATTTGTACACCAGTCACACCACAAGACAGTTTA
TCATATAAAATACCTCAATTTTTTGTATTCCTCATTTCCACCTCACAAATTGTACTGGTGA
TGAATTTTAAGGGTCTG

TCGCCNCGCGTCCGGGGCAAGGAAGGCTCTGTTAATTTATAGCTGTTTAGAGGGGAAAGCA
GTGCAGACCACTTATTAAGCCCGCTGAGGACTAGCTTTCTGTCTTTCATACATTTGGGAA
AGATAGGAATGACTGTTTCAAAGAAGAGAGGTGCACATAATTTATGCAGGCAAGTATGAT
ACTTATTTCA TTGGTTTTGTGAGTCATATATACATATATATACACATATATATA
TGACTTGAAAATTAAGATTTAATACTTTAATGTTTTAAGTGTGGGGGTTTGGGAAGGAA
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TATTCAGTGGGTTTGAGGTTTGGACTACTTTCTTCAAACCTTAGAGAATTATAACAGGATG
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TGATAAAATTTTTCTGGTTAAATCC

CCNCGCGTCCGCCNCGCGTCCGCCAGGCCTGGGCGGGCCGTGACGGCGGCGCTAGGAC
CCGGCGGGCCGCGGGTGC GGCGAGGCCTGGGCGGCCTGAGGAGCGGGACCCGCGCCTC
GGCTCCCGGCGCCATGTGAGGGGGCTCGGGGGCCGCGGGGGGCCGGGCGCTCCCCGCCGG
AGGTGTGAACCCACATCCCTGCCCCAGGGCCACCTGCAGGACGCCGACACCTACCOCTC
AGCAGACGCCGGAGAGAAATGAGTAGCAACAAAGAGCAGCGGTCAGCANTGTTCTGTATC
CTNTTGGCCTCATCACCATCCTCATCTNTACAGCTCCAACAGTGCCAATGAGGTNTTN
CATTACGGNTNCCTGCGGGGCCGTANCCGCCGNCCTGTCAACCTCAAGAAGTGGAGCAT

TGGGGCCGGGAGGAAGTCTAACCTTTGGGAGACTCCAAGACCGCAGCTCCGAGGTCGGCG
GGGGTCTGGGTGGCCATGGAGGAGCCCCCTGTGCGAGAAGAGGAAGAGGAGGAGGAGAG
GAGGACGAGGAGAGGGACTAGGTTGGGCCCCGAGGGGGCGCTTGGCAAAGAAGCCCCCTCC
AGCTGACCGCCGAGGACNGTGTATNACATCTNCTACCTG

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TGCGGACTGGCCTCCCAAGCGTGGGGCNGACAAGCTGNCGGAGCTGCAATGGGCCGCGCGC
TGGGGATTCTTGNTTGGCCTCCTGGGCGCCGTGTGGCTGCTCAGCTCGGGCCACGGAGAG
GAGCAGCCCCCGAGACAGNGGCACANAGGTGCTTCTGCCAGGTTAGTGGTTACTTGGAT
GATTGTACCTGTGATGTTTGAACCATTTGATAGATTTAATAACTACAGGCTTTTTCCCAA
GACTACAAAACTTCTTGAAAGTGA CTACTTTAGGTATTACAAGGTAAACCTGAAGAGGC
CCGTGTCCTTTTTGAATGACATCAGCCAGTGTGGAAGA

CCACGCGTCCGGGGTGTGGTGCGGCGCTGTTGGGGTCTCCGCTGGCTCATGGCGCCAG
GCGTGGGAGGCCGAGTCCCCAGTGCGGAGCACTGGCCCGACTCGGCTGGGAGGACTGCCG
GGA CTCCAGAGTCCGCGAGGCGCTGCGGGCGCTGCACGCCGCCAGGGAAAACAAAGAAGA
AGAGTTAATCGACAAACTGGAGGTGGTCACAATGCCTTCCCCATACCAAAAAGGACTGCC

TABLE 1
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AGTGAAGCAATATGCTGTGCAGTCTCAGCTTCCCGTATATGAGTGGCCGGATGTGGGATC
TGGAGAATATGATGTTGGAGTAGTGGCTTCGTTTGGCCGACTTTTGAATGAGGCTCTTAT
TCTTAAATTTCCCTATGGCATATTGAATGTTTCATCCCAGTTGCCTCCCGAGATGGCGTG
GCCCAGCCCCTGTAATCCATACAGNTGCTTCACGGAGACACAGTTACNTGGAGTAACAAT
TTATGCAAATTAGACCTAA

Sequence 1061

GCCGGTTCTTAGGGAGGCAGGTGCTGGCCTGGCCTGGATCTTCCCCATGTTCTGTTGCT
GCCTTTTGATACGCCTGATTGTCAACCTTCTGGGCATCTCCCTGACTGTCCTCTTCACCC
TCCTTCTCGTTTTTCATCATAGTGCCAGCCATTTTTGGAGTCTCCTTTGGTATCCGCAAAC
TCTACATGAAAAGTCTGTAAAAATCTTTGCGTGGGCTACCTTGAGAATGGAGCGAGGAG
CCAAGGAGAAGAACCACCAGCTTTACAAGCCCTACACCAACGGAATCATTGCAAAGGATC
CCACTTCACTAGAAGAAGAGATCAAAGAGATTTCGTCGAAGTGGTAGTAGTAAGGCTCTGG
ACAACACTCCAGAGTTTCGAGCTCTCTGACATTTTCTACTTTTGCCGGAAGGAATGGAGA
CCATTATGGATGATGAGGTGACAAAGAGATTCTCAGCAGAAGAAGTGGAGTCTGGAACC
TGCTGAGCAGAACCAATT

Sequence 1062

CCNCGCGTCCGCTTTGAATNCTTATCTTTGATTTAATTTACACGCCAGCATTGTCACG
TTCTAAATAATATTTAGCTCAACTGATTATACGTATTAATGACCATTCTAGCAAAGGCC
TACAAGTGGTGTGGGAATCAGGGAAAGGCTGCCTCTTTGGTATCTCAACTGGTATTGATT
ATTGCTATCAACTATTTGGGGAGAAAAAATCAAATGAAGCCCTGTCAAATTTTAGAAGT
ACTATCTTTGGTCCTTCAAACACTTTGTGATGACACCTTAAGAAAAATAAAGTTGAAGTT
CAGGTCTTGCCATTGCCATTACAGACAAATTAGGAGACTTGGTTTACCTGGGAACAAATT
TACTTGAATATTCAGTACCTGAAACTATGCCAAACCAAAGAGCAGCTGCAGTACATTCGT
TATTTTAAATGAACAAGGTTTACAAAGNTTATTTTCATCTATACCGTAAGGNTGGATTTT
TTTTNAA

Sequence 1063

GTCACCACGCGTCCGCCNCGCGTCCGGCGTGATGGAGGAACGCTGGGCACGGGCCCGGC
GCGGGTGGGGGGCGCCCGAGGGGCCCGGGCCGAGCGGCGCGCAGGGCGGCAGCATC
CACTCGGGCCGCATCGCCGCGGTGCACAACGTGCCGCTGAGCGTGCTCATCCGGCCGCTG
CCGTCCGTGTTGGACCCCGCCAAGGTGCAGAGCCTCGTGGACACGATCCGGGAGGACCCA
NACAGCGTGCCCCCATCGATGTCCTCTGGATCAAAGGGGGCCAGGGAGGTGACTACTTC
TACTCCTTTGGGGGCTTGCCACCGTTACGCGGNCTTACCANAAGTGCAGGCGAGAAGACC
ATTCGCCGCAAA

Sequence 1064

GTGCCACGCGTCCGCCACGCGTCCGCCTGCCCCCTCGCCGCCCGCCGCCTGCCTGGGCGGG
GCCGAGGATGCGGCGCAGCAGCCTCGGGCGCCAGGCTTGCTCCCTCCGGCACGCCTGCT
AATTCCCCCGCTACGTCCCGGTTGCCCCGCCGGGCGCGCCCGTCTCCCCGCGCCCTCCG
GGTCGGGTCTCCAGGAGCGCCAGGCGCTGCCGCCGTGTGCCCTCCGCCGCTCGCCCGCG
CGCCCGCGCTCCCCGCTGCGCCAGCGCCCCGCGCCCGCGCCAGTCTCGGGCGGTCA
TGCTGCCCCCTGCTGCTGCGCCGCCCTGCTGCTGGCCGCCGGGCCGGGCCGAGCCTGG
GCGACNAAGCCATCCACTGCCCCGCTGCTCCGAAGAGAAGCTGGCGCGCTGCCGCCCCC
CCGTGGGCTGCAAGGAGCTGGTGCGAGAGCCGGGCTGCGGCTGTTGCGCCACTTGCGCCC
TGGGCTTGGGGA

Sequence 1065

CGCGTCCGAACGGCATCATCAGCCCGCCACCATCCCCAGCCTGGGCCCTGGGGAGTCC
TGCACTCAAACCTATGGACTACGCCTGGGGGGCCAACGGCCTGGATGCCATCATCACAC
AGCTCCTCAATCAGTTTGAACACAGGGCCCCCACCAGGAGATAAAGAGAAAATCCAGG
CCCTCCCCACCGTCCCCGTCACTGAGGAGCACGTAGGCTCCGGGCTCGAGTGCCCTGTGT
GCAAGGACGACTACGCGCTGGGTGAGCGTGTGCGGCAGCTGCCCTGCAACCACCTGTTCC
ACGACGGCTGCATCGTGCCTGGCTGGAGCAGCACGACAGCTGCCCCGTCTGCCGAAAAA
GCCTNACGGGACAAGAACACGGCCACGAACCCCCCTGGCCTCACTGGGGTGAGCTTCTTC

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TTCTTGTCGTCATCGTCCTTCTTCAAGCTTGGCCAGCAACGAGAACGCCACAAGGAACT
NGTGAGCCCACGTTNGGCCGTCGGGAAAACACGGGGN

Sequence 1066

CGCGTCCGGCCTCCAGCACATCCTGCCTGCAGAGGGTCTGGCTAGCTGCCTTTTCAGCTC
TCGAGGGATAGAGATTCTACAACCTCCCTCTGTCATCAGTTCAGAGCCACTCCCCTTTG
CACTAGAAGTTCTTGCTTTCAAAGAATGAGGGTGTGAGGGAGGGAGGGGTCAAGAAACAG
AGTGACAGGGGAAACAGGCAGAACAAAGTCAGGGCAAAGGACCCAGCATGAATAGTTGTG
GAGGTGGAGGTGGGGAAGCAGCCTCACATCTCACACTTCCTTCTCTTAAATGTGAG
CAGCTGACTCCAAGCCTTGTGGAACCTCTAGAAGGTAGAACCAGCCATCTGGGGAAGCTG
GCCTTACAGATGCCCCGTCTGGCATAGTGGGAGGTTCTGTGCTCTGAGAACCCAGTGT
GAATCTAGACATTCCACTGCAGCCTGGGAAGAAGCCTGTGTTTTCTTTAAAAAGTCT

Sequence 1067

GCGTCCGGTTCTTAGGGAGGCAGGTGCTGGCCTGGCCTGGATCTTCCACCATGTTCTGT
TGCTGCCTTTTGATAGCCTGATTGTCAACCTTCTGGGCATCTCCCTGACTGTCCTCTTCA
CCCTCCTTCTCGTTTTTCATCATAGTGCCAGCCATTTTTGGAGTCTCCTTTGGTATCCGA
AACTCTACATGAAAAGTCTGTTAAAAATCTTTCGCTGGGCTACCTTGAGAATGGAGCGAG
GAGCCAAGGAGAAGAACCACCAGCTTTACAAGCCCTACACCAACGGAATCATTGCAAAGG
ATCCCACTTCACTAGAAGANGAGATCAAAGAGATTNGTCGAAGGGGNCNNAGTAAGGCTC
TGGACAACACTCCAGAGTTCGAGCTCTCTGACATTTTCTACTTTTGCCGGAAAGGAATGG
A

Sequence 1068

TCGACCCCGCGTCCGGCTGGTTTTCCGTCTGGTGAGGGGTACTTCCGGGTCCGACGGCG
CTAGCTGCAGCATCGGAGTGTGGCAGTGCTGGGCTGGCCGGCGGGCTGGGCTGCGGCCCG
CGCGCGGCCCGGCATGCANGGGGGCAACTCCGGGGTCCGCAAGCGCGAAGAGGAGGGCGA
CCGGGGCTGGGGCTGTGGCTGCGCCGCCGGCCATCGACTTTCCCGCCGAGGGCCCGGACC
CCGAATATGACGAATCTGATGTTCCAGCAGAAATCCAGGTGTTAAAGAACCCCTACAAC
AAGCCAACCTTCCCTTTTGAAGTTTGCAACCAACTCTTGCTGGGTTTCTTTGCTGGAA
GCACNTTGAGCCCACTGTGCATGAACCA

Sequence 1069

CCGTCCGGGAGGTTGAAGTTCAGGCTAAGACCGTTACTGAATTGGTTACTAAGAAGAAGC
CAAAGGCTGAAGGCTATGCTGAGGGTGACCTCACTCTCTATCACCGTACCTCAGTCACTG
ACTTCCTCCGAGCTGCCAACCTGTTGACTTCCTCTCCAAGGCCAGCGAAATCATGGTAG
ATGATGAAGAGTTGGCACAGCATCCAGCTACCACTGAGGACATACGGGTGTGCTGTCAGG
ACATCAGAGTGTGGGGCGCAAGGAGCTCAGGTGCTACTAACTGGAGAACAAAACCTTC
GGCGATATGTGGCCAAGAAGCTGAAAGAACAAGCAAAGGCACTGGACATCAGCCTCAGCT
CTGGAGAGGAAGATGAAGGTGATGAGGAGGACTCAACAGCTGGAACCACAAAGCAGCCCT
CTAAGGAGGAGGAGGGAAGAGGAGGAGGAGGAACAACCTGAACCAGACCTTGGCAGAAAT
GAAGGCCCAGGAGGTGGCGGAATTGAAGAGGAAAGAAAAAGAAG

Sequence 1070

GCGTCCGGTGCTGGAGGAAAATGTTTCTGGGGAAGATGACTCAGTCATTTTGTGGCGAGA
CACCTTTTGTTAACTCCCACTGACCACTGTTGGGAGCCTTCCTGGAATGATCGTGGGCTG
AGCGGAGATGTTTTTGCAAAATGAACTGAAGCTGAAAGAAAGGAGAATTCGAGTGAAC
CAAGAGAAATCCAAAGACCTGGGGAAGGAGGACTTAAGATGAAAGTGAAGCAAGAGAGGG
AAGGGGAAATGAAGTGAATGCGTGAGGGTGTGAGAGAGGTTTGGGTTAGGAAACATG
TTTTTAGTGCTATTTNCAACCAGGG

Sequence 1071

CACGCGTCCGGGACTGATCTCNAGGACCAGCACTCTTCTCCCAGCCCTTAGGGTCCTGCT
CGGCCAAGGCCTTCCCTGCCATGCGACCTGTCACTGTCTGGCAGTGGAGCCCTGGGGGG
TGCTGCTGTGCTGCTGTGCAGTTCGTGCTTGGGGTCTCCGTCCCTTCCACGGGCCCTG
AGAAGAAGGCCGGGAGCCAGGGGCTTCGGTTCGGCTGGCTGGCTTCCAGGAAGCCCTA
CGAGGGCCGCGTGAGATACAGCGAGCTGGTGAATGGGGCACCATCTGCGATGATGACTT

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CACGCTGCAGGCTGCCCCACATCCTCTGCCGGGAGCTGGGCTTCACAGAGGCCACAGGCTG
GACCCACAGTGCCAAATATGGCCCTGGAACAGGCCGCATCTGGCTGGACAACCTTGAGCTG
CAGTGGGACCGAGCAGAGTGTGACTGAATGTGCCTCCCGGGGC

Sequence 1072

CCCGCGTCCGCGCGACGGCCGCGCGGGACCTTAGGACCCGCGGGCTCCAGGGCTACT
GTCCGTCCGCCACTGCGCGCCAGCAGGTCTGGTCTCCGCTCTCCAACAGCTGAAAGGCC
GGCGCAGTGAACACAGAAACGAAACCAAGAAATGCCTTATCCACAAACAAAGAGTTGA
TACTTGGCATCATGGTGGGCACTGCTGGAATCAGCTTGCTGCTCTTGTGGTACCACAAGG
TCCGTAAACCAGGGATAGCAATGAAGTTACCTGAATTTCTTTCTCTGGGTAATACATTTA
ATTCAATAACTTTGCAAGATGAAATACATGATGACCAAGGAACAACAGTAATCTTTCAAG
AAAGGCAACTTCAGATACTGGAGAAGTTAAACGAATTCTGACAAATATGGAAGAACTCAA
AGAGGAAATCAGATTTCTTAAAGAAGCTATTCCAAAGCTGGAGGAATATTTACAAGGATG
AACTTGGGAGG

Sequence 1073

CGCGTCCGCTGAGTTCNAGGATGGTTTTTCTTGGGACCAGACATGAACAAAAGTTGACC
TCATGAGCACTTCAACCTCTCCAGCTGCCATGCTCCTCCGGAGGCTGCGGCGACTCTCCT
GGGGCAGCACTGCTGTCCAGCTCTTCATCCTAACAGTGGTGACAGTTTGGCCTGCTGGCC
CCCCTGGCCTGTCAACGACTTCTACACTCTTACTTCTATCTGCGCCATTGGCATCTGAAC
CAATGAGCCAAGAGTTCCTGCAGCAAAGCTTGAAAGAGGGTGAGGCTGCCCTCCACTAT
TTTGAGGAGCTTCCCTCTGCCAATGGCTCAGTGCCCATTTGTCTGGCAGGCCACCCCCCGG
CCCTGGCTGGTGATCACCATCATCACTGTGGACAGGCAGCCTG

Sequence 1074

CGTCCGTGAAAATCCAAAGATGTATCATTTTTATTTGAATCCATCATGCAGTGTACATTT
CAGATAATTTCTTCAGTCTCCAGATAGGAGTGTATCCAAACATCTAATTTTATGTGCAC
TGTGTATCTTATATGAATGTTTTATTTTATATACCACATGCAAAAATGNCCATATGCACT
ATTTAAATGTTTTAAATAATATATTCCTTCTTTATAATGCTAAATCTATATGAGTACCAT
ATTTTTATAAGTCAGTGGTCTGACNNGNNTTCATTTTNAANTAACNNNNGCTTCAAAATG
GGTATTCAANGNAAAAGGGTGGNTGTGAGGAGAANATGTGAAAGNNGNNTGGNGNNT
CTTTTGCTTTGGGCCAGGAATTNNGGGGGGCNAAAATNNACCCANAACCTGGNNNAAAAN
TAGGNCCANTTGGGGGNGANAGGTTTCACTTTGGGGCNCAAAAANAAAAANCCCGGGGTTT
TTTNTNTTNNCCAAAATANATTNTTTTTGGGATTTTTTTTTGTNCCCCCCCCGNATTAA
TGGGGANTTGGCTGGNGTCTTGGCNCCTNTCATTGTGCCAGACCTTTTTTTTATTA
AAGAACCTTGGGAAAGGTCTTAAGTNCATTTGGGAAAAAAAAAAAAAAAAAAAA

Sequence 1075

GAGCCGNCCCACGCGTCCNCGGNCGCGTGGGCTACCTTGGAAGCAGTCATCTCTCAGTCT
TACATTTGGAGAATGTGGATGGCATGACATCAGAATTCCTTTATATAATTTAACTTCAGA
ATAGTCTGAGATCATCGAAGCACGATGGTCAAGGGAATTCCGTTTTTGTGTTAGAGCAAA
TATGTTTGCTGTTTGTCTTTCATCACAACATCAGTGGAGTTTCAGCACCTTACAGAGCT
CAGTGAACCCCTGGTCAACATCAAAGTTAGCACACAACAAAGCCAACCACGTGTCCCC
TCACAGATGACAATGGCTGAACTCTGAGTGAAACCACCTGTATGGCCGGGCACAGTGGCT
CA

Sequence 1076

GCCCCGCGTCCGCTTTTTGAGAATCTCTGCTCTGTTCTAGGTTCACTGCTGGGTCTGG
GAATACAGCAGGACAGACCTCAGCTTATCTCTTCATAGAAATTATACAAAGAGAATTGGG
GAGACAGCTAAGAAGAAAACAAAGAAATAAAGCAGTTACAAATTGTGATAAAGTGCTTTT
GAAGGAAAGAAGGGGTCTGAGACAACAACGAGGAAGGGGCCTCTCTTGAACAGTAGTTG
GGAAGGAGGCAGACATGCACCACTGATGTGGTGACAGGTGCTCTGAAGGAGGTCACCAGG
ACCTGACCTCTTTGAAGGATCAGAAAATACTTCCCTGAAGGACTGACATTTGAGCCTAGA
CCTGAAGGGTGAGCCATCAAGCTAAGACAATTGGGGAAGAGCATTCCANGGAGAGGGAG

Sequence 1077

CGCGTCCGATCTTTGTCTGCTTTCCTATAACTCAGTACTGTAACCTCAGTACTCTGAAATA

TABLE 1
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GTTTCCTTTGTTAATAGAGTCACTTTTATAGTACTGNGCTTGAGGNNATATACAGAGTAT
TGTGTCCAAATTTATCATTGCACAAAGTGTITTTGGAAATCTTGTTACTCCTTAGTAA
ATTACCTGTAATTGGGTAAATGCTGGTAGGGTTTAAATCTGATTGCTAAAGTGAATTC
TCTATAAAGTGAGTTTTGATACATAGAACTTTNCATATAATTCTTAAACTCATGTGTCA
TGTATTTTCATTTATAGTTTTTCATATTCATTAACATATGTTGTTCCCTTACCATTTACAG
CTCANAATTCTGCANATGCAGATTTTTGCAAACCTTTGATGCATTTGGACAGTCTAGTGGT
TCGAGTAATTTTGGAGGTTT

Sequence 1078

TNCGGGCGGCTGCGGCGGGCGGGCAGGCGGGCAGGCCGGCAGGCGGGTGC GCGGAGGGCT
GGTACCCCTNAGCAGGTGGGCGGGGTGCGGTTGGNNGCGGCGGCTGGGCGGGGGGCTGCC
CGGCTGCGCTCGGGCCGTGCGCGNGGCCGTGCGGGCACGCCATGGACTTCAACATGAAG
AAGCTGGCCGTGCGACNGCGGGCATCTNTTTCACCCGGGCGGCTGCANTTCACGGAGGA
GAAATTTGGCCAGGCTGAGAAGACTTGAGCTTGATGCCCACTTTGAAAACCTTCTGGCC
CGGGCAGACAGCACCAAGAAGTGGACAAGAAGAAGATCTTGAGGCAAGACAAGAGGTGCC
TGCTGCAGCCCCAACCCAGTGCCCCGAGTGAGGGAATTANCTGTATGAAGAAGCTTG

Sequence 1079

CACGCGTCCGTGCTGAGCGGTCCCGAGGGGAGGGGCGCTGAGGCCGAGTTCAGTGCCTGA
CCCCTAGCCAGATCAAGTCCATGGAGAAGGGGGAAAAGGTCTTGCCTCCCTGCTACCGGC
AGGAACCTGCCCCGAAGGACAGGGAGGCCAAGGTGGAAAAGGCCAGCACCCCTCCGTCAGG
AGCAGCGTCTCTTCCCAACGTGAGCACCGAACGTGAGAGACCCAGCCTGTCCAGGCCT
TCAGCAGTGCATGCACGAGGCTGCCCCCTCCAGCTCGAGGGGAAGCTGCCATCTCCTG
ATGTCAGGCAGGACGATGGGGAAGACACCCTGTTCTCGGAACCCAAGTTTGACAGGTCA
AGCTCAAGTAATGTCGTCTTGAAGACGGGATTTGATTTTCTGGACAATTGGTAAAATGTA
TTAGAAAAATACAATGAAAGAACCCTAAAATGTTTTCCAAAATGGTGTGGTGGAGGAGGA
TAAAAAAGGGCCACCTTTTCTATGTATTTTACTGGTTTCTTGACACTCTTTTCTTAATC
ATTTGGAAACTGGTCAATACTGNCAGATTTTTT

Sequence 1080

GTAAGCCAGGTGCTCCCCCTTCACTTCCTGTGTGCGGAGCACGCTCGCCCTGGGAGTTTC
ACTAGAAAGAAGGTTGCCATGGGCCAGTGGGACAGCTTGGATCTCAAGTGCACGCGGATG
CCCCAGAATCCAGGATCTCAGCTGAGCTGTTTGTGGATTATTAGATCTGACTTAAAAGA
ATATTATCCAGCAATGCAAATGAACAACTATAACTACACACAGCTGCATGGATAAATGT
CAGAAACATGACGTTGAAGTGTGAGAAGCCAGATGCAAACCGAGGACTCACTGTGCAATT
CTGTGCATGTACAGTGGCCAGGAGAAGGGAGCACTGGCTTTTGTCTTCATCAGGCCAAAG
ATGCCTTTCTTTGGGAATACGTTCAAGTCCCAAGAAAGACACCTCCTCGGAAGGTGCGCA
TCTTTCTCCAACCTGCATTCTTTGGATCGATCAACCCGGGAGGTGGAGCTGGGCTTTGAA
TACCGATCCCCCGACTATGAACCTGGCAGGGCAAAGCCTGAAAGTTTGAAAAT

Sequence 1081

TGCTCTCTCACCTGTTAGCTGTGTAGCATTGGGCAGGTTACTTAACCTGTCTGTGCTTCA
TCTGTGAAACAGGAATAACAGCATTATTAAGGATTGTTTTAGGATTGGATGGGTAAATAG
ATGTAAAGTCTTAGAACTATATTGAGCATCCCATCAAGGCATTGTATTATATTGAAACAA
TGGGGTTTNTTCTCTTTATNCTTTTTTAACTATATAATGAACACTTTTGATCTTAAGT
ATTNCTAA

Sequence 1082

CCGCGTCCGGTGAATGTTAGTATTGGGTGTGGGATGCATCAGGGACACAGGTTTGTA
CCATGACAAATCAATTGTAATACTAAAGCCNAGTGCCCCCTGTAGTCCCAACTGCTGGG
AGGGTCACTTGANCCCTAGGGGGGAAAATGCAGTGGACTGGATTTTNGGCCCTTTGCAC
TNCAAACCTGGGTGACATAGTGAGGCCCTTGCTTCTACCANAAAAAANNANNANN
NNANGGTGCCGGGCCGCTTAGAACTAGGTCTTAGAAGAAAAAACCTCCACAACCTTC
CCCCGAAACCTGGAAAACATNAAAATGGAATGCCAATTNGTTTGGTTGGTTAACCTTTG
GTTTTATTGCAAGCTTTATAAATNGGGTTTACCAAATTAAGGCCAATTANGCCATT
ACCAAAAATTTTCAAAAAATAAAGGCCATTTTTTTTTTACCTGGCATTCTTAGTTT

TABLE 1
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NNTGGGNTTTTGGTCCCAAAACCTCATCNAATGGGTANTCTTAATCATGTCCTNNGGGATC
CCCCCGGGTTACCCGGAGCCTTCGGAAATTAATTTCTTCTTTCCGCTTTTCTTTCGC
TTCATTGACCTCCGCTTNGNCTCGGGGTCCGTTTCCGGGCTTG

Sequence 1083

TCGACCNCGCGTCCGTGGAGGGCCCATCTGCCAGAGCCTGGAGTCTGCGAAGGCCGGGAC
CCGGTTCCCCGGCCACAGTGGGGGTGTGCAAACCCGAGAGAACTGGGAAGTGCCGTCAG
AAGCGATAACTGACGACGTCTAATGTCTATCTGACCGCAGTCGCTGAAACCTCTACAACT
TAGTTGACCGTAACTGCCAGAGCCCTGCCCTGAATTCCTGTCTTACTCCCTCTTTAAGA
TTGCGTACCCACTGCAGAGTGCTGAAGACGGGGTAGCCACCGAGGTTGCAAATTCGTGAA
GAATCAGCATCATGTTTGGCAGCTGAGTATTGGAGCCAGGAGCCTGCCATGAGGTTTTGA
GAACAGAGTGCTGTTTTAGAGCTGGCAGCAGCATCTCAGCCCAAGAGAAGGTTATATTCC
CAGAGGATGTGAGTCCCAAGGACCAAGTAGCTGCCATCAGTTTGGATTCTGAAAACCTAAC
TGGCATCAAACCTGGGTGTAGAAACATG

Sequence 1084

CGCGTCCGACTGTGCTCTAAAAGAATGAAGGAAATAATAAAGTGATAGACAGGGAAGG
ATAGAAAAGACTTAACAATATACATATGTTCCGTCTTTGCTGTTTTGGAGAATGATGGAT
AAGTANGTGTTCCTGATTCTGAAGCATAGCTGAACAATTTAATTGTGGTTTACCATCTT
TTTGGTTCCTCTTCAGTAATTAACCTATCGAAAATCTGTCCTAAATGTTTGGACTGGGG
CACAGTTCCTCCATCGCTTTGGGAGAAAATCATTAAATATGGCATACTGCAGATTGGAGG
GCAGGACCACTGAGGGTGTGATAGACATTAGCTCTATGGAATTCTGCTAGCAATTTCCAA
GTGACAGTGAGGAATTATGGATATATGTTTGAGGTCATTCAAGCTTCCTGAGTACCACAT
TCCCCAGCTACTTAGACACCGGGTTAAATATTAAAGATGTCTAGTTCAACAGCTTGAA
TTCCATTGATTGGAT

Sequence 1085

GACCCCGCGTCCGGCTTCCTGGGTTGCGAAAGAACCCAGTTCAGGAGTTTCTGTTTTAGTT
TGAGATCTTATAGGCCTGTCTCATCAGGTTGGTGTGAGCCAGCTAGGATTAGGCAGAAT
TGGGTGGGGCTGTAGTGCATCTTTGGCACAGCATGTACCTGTCTGACTAATTCCTCTGTC
TTTTCTTCTCTGTTGCAATTCATGGGTCTTAGCATCTTCTGAATGGTGTTTAGTAGTCA
TCCTGTTGATTTCCTGCTAGGGAGTAGCATACTCTGGCTCTGTACCATTGGCCAAGGGAC
TTAAGGATAGGTGAAGGGCTGCAGTTTTGTTAAATGGAACAATATGAAGAGATGGCATTG
TAAAAAACTTNTGNCAACTNAA

Sequence 1086

TGTCGCCCCGCGTCCGATCAAATCTTGATGAAGGATTGTAGATTTTTGCTTTTTCTTTT
GTTTTTAAACTTATTCCAATTGCTAAATTGGTAGTTTTTTCAGTCTTTATAAATACAGGA
TTAAAAATATATACAGTTATATGAAATGTTATTTTCTATGTGTGTCATATAGTTCA
ATATTATGCAATAAATTTGGTGTTTTAACTTAAACTATTTCTTATTGTACTTGCAGAAT
GGATAGCTTGCTTTTAGTAGAAGCATTAGGTCGTATACTCAGATAATCTAATAGAAGGTC
AGATTTGATTCTGCTAAGAAAGTAGAGCCCAAGTGCTGCAGAAATGGAGAAGAAAGCA
GGGGCAAGGGAGCAGATGGCATTAAAGGAAGAATGAAGTTTTTGAAGGTTGGGGATGGACG
AAAAGGGTGTCTCATGGAGAGGGGATGCTTTAGCAAAGGCTCAAACATTGGGGCATAT
TAGGCAAGAGCCAAGAAACAGTTTGAAGGGGAACATCAGAGGAAATAGGCCAAATTAAT
AGTAAATN

Sequence 1087

GGNGTCGACCNCGCGTCCGGAAATACTCAAATAATGCAACATTACTTCCCAGAAATGAAA
ATACATTGCATCTCTTATTGAAAGAGCCAACAGAGGCAATGAAAAATAATGTACACATA
TGTGCACCCTTAATTCCTTTATAATGAACCTTGAGAAATCAAGGCTTTAGAAAAATGCTGA
GAGACAAAGCTTCTGAGCAGCAACACTGGATGCAGGAAAAAAATGGAGTAATAAGTG
TAAAGTTCTGAGGGGAAAAAAATATCAGAACCTAGAAATCTAAATTTAACCAAACCTGTC
ATTAAGTAAATGAGAAAAAGTAAATTCCTTTGAGAAACGCAGAGCCTAGAAAGGATTACT
AATCGGTAGGATCATCTTTTTTTGTTTGTGTTGTTGGNTTGGGGACAGACTCTCACCTCT
GTCACCCAGGCCTAGGTTTGCAAGTGAGCCCAGGATTGTGCCACTGCCCTCCAGCCTTGG

TABLE 1
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GGGTGACAGGAGCAAGGACTTCATCTCAAAAAAAAAAAAA

Sequence 1088

TCCCCCTGCCCCCAAGCTGAGGGAATAAACTCTGCCTGTCGGGTGCCCCACCAAGGGA
AATAAACATGGCCTAGCTGCCAAGTCATGCCTGTAGGGTGCTCTCTACTGGCAGTTTCTG
GGTGGTGCATACATCTAGTCTCCCTAGAAGAGCACAGTCCAGAATTGAGGAGGTACAGCA
GAAACAGACTGCAGGCAGAGAGAGGTCTCATAGAGCTTGGACAGGGCTAGGCACAGAAAG
AACAGGCAGCGTATCCAGAAGGGGGCAGGGAATGGGTGAAGAGGTTGTGCTCTAGGGCAG
AGCTGAGCTCTGATCTAGAAAGGACAGCAAAGATACCTGGAAGGCCTCCCGATTCTTGCG
TTGTTGGCGTCGCTCCCGAAGCCGGG

Sequence 1089

CGNTCCTTGGGTAAAAGCGTCCCAGAGACGGGAAGAAATATGGTATAAGCGAGAAGGCCT
CATAAATCTGGGCTGTTAAAAATCTAAGTTAAAAATATGTTTTAAGTCAGAAAAAAAAAA
AAAAAAAAAAAA

Sequence 1090

CGCGCCTGGTAAATTATATAAGCTTAAAAAACAAAAACAAAAACACTTGCTTTGAAAA
GAGTCTCTCAGCAGCAATTTTGTCTTGCCCCTACTTCCACAGTTCCTTTTCTTACCATT
TCACATCTGGATTACTACATTGGCCTCTTTGCTTAGACTCCCAATATTCATTGCTTTCC
TTCACCCCATTTTATGGAGGACTGTCAGATCAATCTTTTAAAGATAAATTTTATAATGTT
ACTACTGTTGCCTATTGGATTAGAGCCCTAGGGGTGCTTTTGTAGTCTCACTGACAGCT
GACATTAGTGATTTTTACCCCTCTTCTTATTGCTACCCTGTGTTGATGGCCAGTTTCCAG
GTGGGCACCTGCTCCACTTGCTTTTCAT

Sequence 1091

GGGGTATGTGTGGTTCTTCCAGGAAAGTGCTGAAAATATCACCCAGGCCTCTGCGCCACG
CCCTGGGAGAGTACACTCCTGGGCTCACGCCTCTGCATTCCAAGGCTGACAGCTAGAAAT
ATACTTTGTAATAACCAACAACTTATTCACAAATATTCCAACTATCTACCAGCTCCAAT
GAGCTTGCTGAGGATGGGTATGACCCAGTCTAAGGGGAAAGAATCTAAACACAAGTAA
ACCTGTTTAAAGGCCAGATCTCCAGATGGAGATCCAAGCAGATGGCGCCTAAGGTTTGCC
CTTGAAAACTACCAAGGAAGCCACAGAGAGGGATCTTTGGACCTTCTGGAAAATGGTAAG
GCCCCAGGTAGATTATGGCTCCTCTGCCCTGGAGGCTGAGCCGCCCTCTGGTTACCTCAC
ATCTTCTGGTTTCTTCTGAGTGGGACTTGATCTCATTCTGCATTACAGCAAGGNGGAA
CTGTCTGGCAAGAGCTTAAATTAGGACCTGNTGGTGGGGACCTTTAATAGCAGGTGGAG
GGTTTGAGATCCCNAGATGCCCNAGATTAATTCAATAGGGGGANGAAAGATTTGGCCC
AATTCAAAAGNGCTTAAAAAAAAAATTTT

Sequence 1092

CGCGTCCGGTTCTTTGGTTGAGCTTCTTTGTATCAGTAACAAAAGGAAGCATCATTCACT
CTTTCTTTGTAACCTAATGTAAGTCTCTTTGTACATCCTATTACTTCAAATCATTGAAG
TGAAGTCCATTTTACATCTGTTGGGAACAATCATCTAGCTTCTTAAATGACTCATCTTA
AAATATGAATTTTAGACTGCCTAAACATTCTGAGGGAGTACAGTGTGATATAGCAGAAAC
AACCGGGGCTTAAGAAGGATCAAAATGAAAGGTTTTGTGAAGGATGTGCCAGAGACTGCT
CTCTGTTACACAAAACCATTTCTTCTTCTTCTGCGCATAGAGCCAGACTAGATTTCC
AAGCTTTCCTTGCAATTGAGCTCTCAGAGTCTCGTCATTAGAATGTGAATGATAGGCCG
GGCGCAGTGGCTCATGCCTGAGATCCCAACACTTNNAGAGGCCAAGGTGGGTGGATCACT
TGAGGTCCAGAGTTTCNAGACCAGTCTGGCCAACGTGGTGAA

Sequence 1093

CGCCCCGCGTCCGATAAACTGGATTTGATTTCTTTTTATGAAANGTTTCATATGAATGT
AAGTTGATTTTTTACTATTATAATCTAGATAATATGATATAAGAGGGCTAAGAATTTTA
AATTGAATCATATATATGATATAATTTGATCCTTCTTGATCTTGAAGTTTTGTAAGTGG
GATTTCTGGACTGATAAATGAATCATCATTCTTCTGGTAAATATTTTCTTGGAGCTCT
GTGTCAACTTTGATCCTTTGTCTCCAGGAAGGTGTGACCTCTCCTTTGCCTGCATACCT
CAAGGCCAGGGGAATATGCCTCAGTGATGCATTTATCTTTGTATATCAGGCCGCATGATT
CCCAACTTTCTGCCACACTTAAATTACGTTCCCTCCATTTCAGTTTTGCTTTTCTGTCTA

TABLE 1
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AAGTTCAGTCAAAGAGTATCAAAAAATTATGTTTCAGCTAGACTGGTGTAAATGTATAAGT
TTTTGTATCTTGATTAGAGGATTTCTAGCTTTTATTAGAGG

Sequence 1094

GCCCCGCGTCCGATCCCTAGATGACATAACAGCCTTACAAAAGGACAGGGAGGAGTGTCT
GTTCCCTACTCTCACATAGCGGAGGAAAGTTAGAGCCTCTCAGTCTCTGTTTATGAGGACT
CATTAACTCAAATAATTGATGCATTTTTCATACATTAGGGTCTCTGTCCATGTGTCTTC
CTGATATTGTTATAGAAATGGCTTCAGGCTGCTGGTAACAGATGCTGCGGAAAAAGAATG
CCTTAAACAAAGCCAGGCGCGGTGACTCACGCCTGTGATCCCAGCACTTTGGGAGGCTGG
GGTGGGAAGGATCACTTGAGCCTAGGAGTTAGACACCTACCCAGCCTGGGCAACACGGTG
AGACCTCGTCTCTACAAGAAACAAATAATTGGCTAGATGTCGTGGCGCACAAAGCTTGTTG
TCTCGGCTACTTAGGGGGCTGAGGCGGGAGGATTATTTGAGCCTGGGGAGGTCAAACTG
CGGTGGGCTGGGATTGCGCTACTGCACTCCGGGCTGGGAGACCGAGTANGACCTGCCTT
AAAAAAAAAAAAAAAAAAAA

Sequence 1095

AGTCGCCCCGCGTCCGCTCATACCCAGTGAATCTTCAACAGAATCTCTTAAAGATCTCCA
GGAAGTATAAGCTCTCATTAAATGTTTGAGTTAGAAGAACTTATTCTGGGCCTTTAATTTG
TTGCATGTGCTGTACTTAAAGCATCCCAGATAATTTTAGCTTATATTTTCATAGTGTTTA
TACAGAGCTTGAATTGGAATGGTCCTTTCCTTGCCTCAGTACTTCTTCCATAATC
TTTCTGCCATAACCATTATTTTTCACCATTCTTAAACACTTATGTGGCAGGCATTA
TGCTAGACTGTAATATGTTTTTTTAAATCCAGTTGAAGTGGATGTGGGAAGGTATTAGA
AAGTAGAAGAAAGTATAGTCTAAATAGAGAGGAAAGAAAGGAAGAGAAAAGTGGGATAT
TTCAAAACCATTTGCGCAGAGGTAGAATGAAATTCGCCAGAATGGGAATCTCCGTATTTT
TTACAAT

Sequence 1096

GTNGCCCCGCGTCCGAGTNAACAGTGGTAGTNAAATTGAGGGTTGGTAAGTTTTTCCATA
GAAGGCCAGATGGTAAATATTGTAGGCTTGACAGACCATGTGGGCTCCACGACTCAACTCT
GCCACAGTAGTTTGAAAGCAGCCACAAACAGCCTTGGTGTGACTTTGTTCCAGTAACTT
TCTTTATAGAATGGGAGAAAATATTTGCAAACAATGCATTCAACAATGGCCTGATGTCCA
GAATTCATGAGGAACCTTAAAAAAGTCAACAACAAAAATCACCAATAACATTTAAAAAGTG
GGCAAAAGATATGAATAGTCATTTTCAAAGAAGACATACCGAATGGCCAACAAGCATA
TGAAAAAATACTCAACATCTCTAGGCTTTCAGAGGCATGCNAANTAAACCNCCTTNGA
TATTATNTTACNNGANCCCNAAATGGGTTTTTTTTTAAAGGCCAAA

Sequence 1097

CCCCNCGCGTCCGTTNAAGTGTGCTTTGGAAAAGGGAAAAAGTCTAAGTAGATATAAAA
CCCTAACTAAGGAAGAAAGCAGGTAGCAGTGGTGGTCCAAGAGACCGTGTAGTGGATGCA
AGGACCGCTCGTATTTTACACGCTATATTTTACGAAAGGGTGGCCCATCTGGCAGGAAGA
TGGGGACATATGTCACATATAGAGCAGTTAAGGAACTAGGGAAAGTGGGAAGACTCAGAAG
ACCTGTCTTTGACCTGGTATGTTCTATCTACAGAACCTAATATGGCTTATACATACTG
CCACAGAAAGGACTGAGGTAGACAGTGGCAAAGACTTCTAGGAGTTGAACCCCTGAAAT
TACATAAGGAGTAGGACCCACAGAACTCTGTCTTTGTAGGCTGCTGACTGCAGAAGAA
ACGGTGTAGCGGAGGCAGGGGGAAGAGGAGTCAGNANAGTACACTGGGAAGGAAGAAACG
GGTCTTTTCTCTT

Sequence 1098

TCGCCCTGGGCCCTCCTAACCAACCAGGGGAGGGGAGAAGGACCCAATTCTTTTCTTTT
GGTGACGTAGCCTGGACCCGTTATGGACAGAGGCCAAAGGAAGATAACAGTGTGGTGTC
CAGAGATGAAACCAAGTGGTTGATGGGCAGTCTTTGAGCAACCTTGTTTATGAGCCTAT
TGATATGCAGATATAGAGGCATCCAATACTATTGACTAATTTAAATCTTATTCAGTGAG
TCAACACTCTAAATAAGCAATGGAGATGGTTCCATTCATTTTTTTGAAGTATCATTTTT
ATAAACATAAATTTCTGAGATTTTTGTTTTCATCTTAGCCTCTGTGGAGCTGCTTCGTG
GTTATGATAAGTGCTGTGTGATGCTCACCTTGGGAGGTCTGCGACATATATTGAAGTCAT
CTCTAACCTGAAGTACTGACAGACTTTCTGGAAGAAAAGGCTTGTAGGAGGAACTTCAG

TABLE 1

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AATTCTATTAAATGGTGTAAATGATGAAATTATAGTTGATATATGCTAGAGCATCAGTGC
TGGGTATTTTAGAAGGGATGGA

Sequence 1099

CGGGCCTGTTCCCTAGAGCCTCATTGGAGACATTGACAATGCCATGAGGACCTTCCTCAAC
TACTACACTGTATGGAAGCAGTTTGGGGGGCTCCCGGAATTCTACAACATTCTCAGGGA
TACACAGTGGAGAAGCGAGAGGGCTACCCACTTCGGCCAGAACTTATTGAAAGCGCAATG
TACCTCTACCGTGCCACGGGGGATCCCACCCTCCTAGAACTCGGAAGAGATGCTGTGGAA
TCCATTGAAAAAATCAGCAAGGTGGAGTGCGGATTTGCAACAAAAGATCGCTTTGGCTGC
TTTGTGAAGAATAGATTGAAAGGGTCAAAGGTGAGAGCCATCTCACATCCATGCAGGAAC
CAAGCAGGCAAGATATAAATATGAAAGTAGAAGAAAAATAGTCTGGAAGAAAAATCCC

Sequence 1100

CGCGTCCGGGAGTGACCCCCAAGATCTAACAGCTGTTTCAGAGCTGCTCATTTTAGAGTG
ATTGGTAGGGAGTTGGTGGCTCAGAGGTCTAATCAGAATGTGTCCTGGGTTCTGAATGA
CTAGCAGACTATCATTAACCAATAAATTATGGGATTTTGTCTTAATTATATACATATAC
ATATACACACACATACACATACATACATGTGTATATATCCCTAAAACCTAATAAAGC
TCAAATAATAAAATCAGATTTCTTAAGTATTCCAATTCCTTTAAATGTAAATCAGATT
TTATAATTCTTTTGTTCAAAACGTCCATTGGCTCCCATTTCACTTAAATCAAAGCTAG
TTTTTACAATAAGCTAAGATAGCAAACATTATTATCTATTTACTTATGAGTTACTTATGT
AACTCAAGCATCCAATAACACTGTAGGGTGCTCAATAAAATAGTTGCTGAATGGATAACT
TTC

Sequence 1101

TGTTTTACGACAGAGCTTAGTGCAGCCNGTTCTTGATGGCTGTGCAATGCTTTCCTTTTA
AGAGTGGAGTTAGCCTCGTCATAAAGCGTGTTTTGAGTCTGTTCTGAACGGGTCAACAAC
GAAGGGAAGTTTCAGGCAGATCTTGTATGCCTGGCCCTGGTGGCTGCTTTCATTTCTTTC
CAGTATCAGTGCTAAACAGGAATGAACATGTTCAAGCCCCGTCTCACCCACCTCTGGCAT
CTTCGCCCTAACTCTGCCCTAGAAGACCTTTCCTTCGGTATCGTCAAGAAAACTGAAGTT
GCTGTTTCACTCCTTCTCCACCCAGAACTTCGCTGCATCTTCTGGATCCCTAGCTCC
TTGCACCCATGATCCTGTCTCCTTCTCAGCCCGGCTTCTGGCTGAGCAGCCTGCACCTTG
CTGTCTTCACTCCTACACGCTGCCCCCACTCCTACACGCTGCCCTGCGTGCTTNTCACT
TCTCTACCCTTCC

Sequence 1102

GTCCGTATCCTATCTTCAAATTTTTAAATATGTTCAAATATCTGGAGGGTGAGAAGTT
ACCAAGTTTGTATGTTTTGTTTGACTCACCATCTTATTTTCTGTATATGTAGTAGCTGG
CAATTGCATATATTTTCTTGATTAACATATTAGAGACTGCTTCCATCATCTTATGTAAC
CTGGAAACAAGCTGAACTAGTCTTTTCTGAAGAACCGTGATCAGTGTTAGATGTGCAT
CCCGTTTTGTCAATCCCTCAGACTTTGAATACAGTCATTACTCTCTGGAAGAGAAATGTA
AGTATATTTTTTGTATCTGCAGTATGGTTTAAATGTATTAATAACACATATGCAGA
CTCACTAAAGTATCCCCAGTAATTAGTAAATTCCAAAT

Sequence 1103

ANTTGGGTACCCCCGGCCNNGGCCAGNTGCGCGCGGCGGGGCATGCTGCTCGTCCCCCGC
GCCCCCGGCCCGGACACTTGGCGGGTGCCACGAGGACCCGACAGCAGCAGTGCAGTCCCC
CGGCGTTCCTGGGCGTGTTCCGGCCCGGTGCGCGGACCTNNGCGGGAGTTGGGGCNTGGG
GGGCGGCGNCCGTTGGTNCGGACAGNCNNGGTGCGCACTTGGGCCCCCNTGNCCATGGCN
GCAAAGGTGGACCTGAGCACCTCCACCGACTGGAAGGAGGCGAAATCCTTTCTGAAGGGC
CTGAGTGACAAGCAGCGGGAGGAACATTACTTNTGCAAGGACTTTNTCAGGCTGAANAAG
ATCCCNACATGGAAGGANATGGCGAAAGGGGTGGCTGT

Sequence 1104

TGCCNCGCGTCCGAGCATCTCAGGTAACAATTTGAGCATAACTTTAACCATAACTTATGA
TAGCATAATAACATTCATTAGTAATTCAGTAGCCGTATGTGCCAGGCTGTGTTAGGTGCT
TTATATATTGTTTAAATTTTAAAACTTGTGGAGTGTACAGATTGGTAAGGTGACATTGT
ATCACAAGCTAGTCTTTGAGTCCAAAGTTTTGTGGTTTTATGTTATGATATACTTTAT

TABLE 1

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CATGGAATTGTCTTATTAATGTTTTGCCAGTGGTTCTTAAAGTGTGTTTCTGACACCAG
TAGCATTGACTTCACTTAGAAACCTGTTAGAAATACAAATTATTTGGCCCCACCCAACAC
TTGAGTCACAACTTTGCAGATGGGGCTCAATCTGTTTTACAAGCGCTTCATGTAATTT
TGATGCAGGCCCTAAGTTTTGAGCCCTGCAGTATGCATTTCTATTTTTAAGCAAAGATCT
TGGTCTTTCTTTTGGACATTGTAGAAATAACATGAACCTGGTTTTTGGTTTGGNNTTG
NTTGGTTTGGT

Sequence 1105

ACGCGTCCGCTCTGGTCAAGCAGGCGGTACTTCTCCTTGGATGTCTCAGCCACAGTGCCT
ATCAGGGTACTGAGGGAGAGCACACATGGCCCGAGGCCCTNGGAGCCCTCGGAGGCTGAG
TCAAAAGAGTCTCCCTCGAATTGGTGGGCTTTAGAAGACTTGGCTTCTTCACTGGAGAG
CTATAAAGTAAACACCACACTGAGGGCCCTCGTCCCAGGAAGGCCTTCAGAGCATTTTCA
TTTTCTGAACACGTCCCTCATCTTTCAAGATTTTCTGGTCTCTAAAGCTGAGAACTAC
AAGCACTGAAATGAGATGAGTTTTGATAAGGATGGTAATGAAGCACAAAAGCGTTATTCA
CATTACTCACTGACTTTAATATAATTTTGAATATTTTCACTTTTGAAAAACAAAATAG
CCTGGGCGACAAGANTGAGACTCCATCTCAAAGGTAAAANAAATTTAANCTGGGTGCCNG
CCGCTTGACTATGTCTAGAGAAAAAACTTCCACA

Sequence 1106

GACCCANAGAAAAGNGCCAAAGGGCATGTCAAGCAATTGAAGTTAAGCTCATGTTTTTA
AAGATCCGTTTATTGAGATGATTTTGAAATGCTCCTTACCATTCAATTTAAAAATAA
AGTTTAACAATGGTTTAAATTCANAATGGATTAAATGGAGTTGGGGGTGGAAAGTAGAG
CCATTCTTAGTAAATATAAATAACTGAAAAGTTCTTCTGAGGAGACTATGTACCGAAGTT
ATCATTGCATCTTTCAGTATAGGCAGATCTCTCCCTCATATAACCGGATGTTTCTTGGCG
CTTGAATATCAGATAAAGGTAAAGTTTAAAGAACTTCTCTAGCGGGGATTTAGGGAAC
TTCTTAAACCTAGAGTTAAAGCTGTTGCGTGTTGTGTTATTTTAGACCAATCAA
CTTCATAGGCTAGACTAGTCTAGA

Sequence 1107

ACGCGTCCGAAAATTCACAGGGTGTGTTGGCACACGCCTGTAATGCCAGCTACTCAGGTG
GCTGAGGCATAAGAATTGCTTGAGCCTGGGAGGCAGAGATTGCACTGAGCCGAGATCGCG
CCACTATACTCCAGCCTGGGCAACANACATCCTGTCTCAAATAAATTAAATTACATTA
TGTTTAAAGAAGAAGTCTAAATAAGATTTCATATGCTGCCCTCCCTCAGATAATGAGGGAAC
CTGGGGTACTTCTGGGCTACTCTGGGGGACAAAGTATACTATTCAAATGGCAAGTTGAA
TTAGTACAGTCTAGGAGCCTTGGAGATGGCTTCTTGAAGAGGTAGAACCTGAAATTCTC
CTTCCTTGAGGGACGGNCAGGATTTGGCCAGATGGAAAGGCAAGTGGAAGGCTTTCAGG
GACAAGCAATGTAANCAGANCCTAGAAATGG

Sequence 1108

TCGACCCCGCGTCCGGNGTAATTCTAGGGGAAATNATATTTCTGAACAACAATGTTGGTT
TGTGCAGGAAAATCACCAAGAACATGACTAGAAAGTGTATAGCTACAGTTTCCCTCTTT
TAAATGGGAATAGCAAACATATAAAGAATATTGATAGGCCGGGTGCGGTGGCTCACGCC
TGTAATCCAGCACTTTGGGAGGCCGAGGCGGGCAGATCAAGAGGTCAGGAGATCGAGAC
CATCATGGCTAACACGGTGAAACCCCGTCTCTACTAAAAAATACAAAAAATTAGCCGGGC
GTGGTGGTGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCGTGA
ATCCGGGAGGTGGAGCTTGCAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCTGGGTGA
CAGAGCGAGAGACTCTGCCTCAAAACAAAAAAGNNAANAANAAAAA

Sequence 1109

CCGTCTCTGGCTTGGCCAGGTTTAAATTAATAAAAAATGAAGATGAAAATAAGTTGTCAGA
TTTAGGATGTATTTAGAAACCAACTGATAATTTGCCAACTAATTGGATGCAGAGAGTA
AGAGGGAGACTCAAGAACACCTCTAAGATTTTACCCTGATCAATGGGATAGGTGAAAGT
ACATTAATGGAGATTGAGAATCCTGGTGGAGGTACAAGTTTAGGGTACTGAAGAGTGCT
TTTGACATGTGAATTCTTAGAAGCCTACTAGATTCTCAAATGGAGACATAAACATAA
TTGAATACAAAAGTCAGGAGTTCAGGAGAGGGCTGAGCTAAAGATACAAATTTGATAGAC
ATGAGCATTTAAAAAACTGCATGAAAATACTAAAGATAGGCTGTCTGCCTATGGAAT

TABLE 1

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AGCCATTCTTTGATCCCTTTACTTTCTTAATAAACTTGGTTTCACCTTACTCTATGGACT
TCCCCCAAATTCCTTCTGTGTGAGGTCCAAAACTCTCTGTTGGGGTCTAGATCAGACC
CTTTTCAAGTACATCTTNCTGATGAACCACAAANGGATTATACTAAAGAGACCCCCCACC

Sequence 1110

CCGGNAATTTGCTTATTCTAATTGAGACACANTGGTGGGGAGTGGGGGTCTGGGGACTACA
CAGGTGCATTTTCTGAACATTTATAAAATGAAAAAGATGGAGGCTTGGCTAGAATGGTTA
ATCCCCTTTTCATTCTCTAATTCTATGACAATTTTTTTAAAAAACCAACACAACCAAA
ATAAGAGTGGACAGTTGAGAATTACCTTTAGGTTCCCATGACCCTGAAGACTGTATTTGG
CCTTGATCCATTAATAAAAAAAAAAAAAAAAAAAAAA

Sequence 1111

CCCACGCGTCCGCGGCCATTTCTGTATCCCCCTGCCTGGGTTTGCTGCCCTTTATGCTCC
TACCTCACCAGGTACAAGGAACATGAAGATGGCTATATGCGGCTGCAGCTGGTTCGCTAC
GAGAGTGTAGAGCTGACACAGCAACTGCTGCGGCAACCACAAGAGGGATCGGGCCTGGGA
ACGTCGCTGAACGAGAGCAGCCTGCAGGGCATTATTCTAGAAACAGTGCCAGGGGAGCCA
GGACGTAAGGAAGAGGAAGAGGAGGGCAAGGGTAGCGAAGGGACAGCCCTCTCAGCCTCT
CAGGACAACCCCAGTTCTGTCATCCACGTGGTGAATCAGACCAATGCCAAGGCCAGCAA
GAGATTGTCTACTATGTGCTGTCTGAAGCCCCAGGGGAGCCTCCCCAGCCCCTGAGCCA
CCTTCAGGGGGCATCATGGAAGCTTCAAGGAATAGCTGAGGAGCCAGAGATCCAGATG
GTTTGAAGGCCGCAGAGCCAGACCATTCTTCCCAGGTCTGAAAGTTTGAGCCAGGCAAG
TGGCAGTGCCCCCTAGTGGGCAGCCGTTGCCAATGGATGCC

Sequence 1112

CCCCCGCGTCCGTAATTTTAAAGAACCTTGTTATTAGAAAATCTCAGCCTAATACAATCT
GAAGTTAAGAGTTTTAGCAGCATTGTTTTCTAAGTAGATTTAGCTATAGATTTTCTTCT
GGCCAAACAAGGAAGAGTATATGCCCTGTAAATGAGTCTTGTTTTGTTATTTAAATAGT
CAGTCAAAACGTAGAAATCAGTATACGTAAATAAAATGCATGAGACTATTAATCTTTT
CATATACTCTACAAATAAAATGAAATCTGTGTGTGGTCTGTTGACTGGGCATCTAAAG
GGAATCAGAAAAGAGATTGTGAAAAGTTATATATATATCCTCTTCTTATTTAGTTTTG
CTTTTTCTATTTTCCATAATTAAGTGCCGTTTACAAAGTGGCATCAAAAAATTGAAGCA
GGCCAGGCATGGTGGCTCATGCCTGTGGTCCCAGCAGTTTGGGAGGCTGAGGGCAGGTGG
ATCACTTGAGATCGGGGGTTCTGTGACCAGCCTGGCCAACATGGTGAAAGCCCCTCTCTAC
TGGGAATATAAAATAGCCCGCGTGGTGGCATGTGCCTGTGGTTCGACGCTACTTGGGA
GGCTAAGACAGGAGAATTGCTTGGGCCCTGGGAGGGGGAGTTCANNNGNCCTGGANCGN
CCCCTGNNCTCNANCCCTGGCAACCANTGNNGACACCNCTTAAAAAAAAA

Sequence 1113

TCGACCCCGCGTCCGGTTTTTTGTCCCAGCAGTGGCATTAAATTACTGTACTTTAAGAC
ATGGAATTGCTGGAGGCTTGGAACTTGAGTGCAATTTCCCTAGTACGACCTCCAAGGAG
AATAGAGCAAAACAGTGGTAGGAAAACTCTCAAATTTTACCCAATTGTATGTTTTCTA
CATTGTCAGTATCTAGTTTTATAGTTAATATGTACTTCTAAAATTTCTGACAGTGNTT
GGTGATAAAACAGACCAAGCTCAAGATGTAAAGAAGATTGAGAAATTCACANTCAACT
AATGCGACTTATGGTAGCCAAGGAAGCCCGCAATGTTACCATGGAACTGAGTGAATGGT
TTGAAATGAAGACTTTGTCGTGTAAGGAAAGTAAATATCTTTGAATTAGAGAAAGTG
TTGGGACAGAAAGTACTTTATGTAAGTAAAGTGGGCTGTTGAGAAGCTTAGAGGTCATTT
TTGTAATTTTNTTTTAATTACTTTAGAAGAGCTAGGGATGCAAAATGTTTTCAATTTGGA
AAGCCTTTATTTACTTTTTGGGAAA

Sequence 1114

TCGACCCCGCGTCCGATTCTTCTTCATATATTATGTCAGAAGAGTTTGAGAAGAAATGG
TATTAATTCCTCTTTAAATGTTAGGTTGACTCACCAGTTAATGCAGCTATTTGGTCATAA
ATGTTTCTTTGTTAATCACTTTCGATTACTAATTCAATCTGCTAGGTTATAGGTCTATTC
AGATTTTCTCTTCTTCTTGAGCCACTTTGGTAGTTTGTGTCTTTCTAGTGATTCTGTTCA
TTTCATCCAGGACAGCTAATTTGTTGTTAGACAGTTGTTACAGTATACTCCTGTAATCC

TABLE 1

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TTTTGTATTTCTGTAAAGTTGGTAGTAATGGCTCTGCTTTTCATTTATTATTTTAATAATT
AGTCTTCCATCTTTTGCTCAGTCAATATAGTGAAAGGCTTGATCTTCAAATAATCTATG
TTTATTCATTCTACTGCTCTCCAACTTCTATTTTATTGATTTATGCTCTAATTATGCTC
TCTATTATTTCTTTCATACTGCTAGCTTTGGATTAGGCTTATTTTGNCTTCTTC

Sequence 1115

GCCCCGCGTCCGGGATGACTAATGAAAGCAATNAGCTTGAACATTTAGAAAAAATTCATA
TATGATCTAAATTTTTATATTATCATTTCTGTGCCTTCTAATTCCTGCATCCTGTTCAA
ACATCTTTCCAGACATTAACCTACACATTGTATAAAACCGACCAAAATGATTTCCCTAAAG
TTCATGCAAAAAAAAAAAAAACAACCTAATTTTCTGTTAATATAAAAGAACTTCAGTT
TACTGACCGTGAAACAGACTATGTACTGACATCCAGGGTAAAGTAAAGACTTTTAAATA
TTGGTCATTAAGGACAGGAGCTAAGCTAGCAAAGCAAACATCTTTAGCACTTTGCAGA
TCTCAAGCAGTTAACCAGGCTCTGATTCCTTCCACTGTTTTATGAATTAATTCAGTTC
TTTTCATGTATCTTTGAACCTAAGATTATGAAGTAATTTCCCTATTAGGGACTAGAATGA
CTTCAGTTTTTTTCATTTGATAAAAATCAGAACTGCTACCTTTCCCTTTTTTAATGATGCA
AAATGTAGATGAGTGCATTAAGGGTTGTAAGGATCTTTATCATTTTATGNCATTCATTGA
AAATTGAAATGTTCAATCTTTTTAATGGTT

Sequence 1116

CNGCTTTCTGCTCTTCCCTTNAAGTTGATACCCTTCTTTTTCTTGTCATTTTGCATTGCC
TGGGACCTCCAGAATAATGTTTCATGAAGTAGCATGTATCCATATCTGGTCTTGACTTT
TTCATCATTATAATTGTTTTCTATGGGTTACTTATCAGTTTAAAGATGCTTAATTCCTAG
ATGAACTAAGAGTGTTTTATTACATGTTGAGATTTATGGTATGCTTTTTCTTCCCTCAAGAT
AATGCATTTTTTGTATTATCTGTAAATGTGATAGGTTATCCATTTGTGTATTTTCAATCA
TTGAACAACCTTGATTTTTTTGGATAAACTCTATTTGGTCATTATGCATCATTCTATAA
ACCCTGCTGAATTTTTTCATTTGCCAACATCTTATTTAGATTCTTTAATCTGTGTCCAA
CAATGAGATTTGTTTTCTTTGCAATTTGTTTTGAATTTTTGGTATCAGAGCTATACTAA
CCTTATAATGGAAAATACATATTTCTCAAACCTTTACACTGATATATTCATAGTATTTTT
TTATAATTTGAAAAATCTTGTCAGTATCTGTATTAAGGCCTNCATTTAGTTCTGCTATT
TCATATTGCCCTTAAGGTGGCTATTTGGCTCTTTAAGGACCCCGATTTTGATTTTGTATT
TTTAAATAAAACCCCATTTATGCTATAAAAAAAAAA

Sequence 1117.

GCCTTTTATGGTGATGGAATATGTCTCAGGAGGAGAGCTATTTGATTATATCTGTAAGAA
TGGAAGGGTAAGCTGTTCTGCTTTAATTCTGTATGTATTTGTNNCTNGNCCTTTATCCT
TTACTAGCATCAAAATGTCAGCAACCAATTTAAGAGGTCTATTTAATAACCAGTTCCCT
TAGTCATATATTTGTTTGAATCATAACTATGTAGAAGTAAAGGATCTTAAAGATTA
TCTCCTTAGCCTGTTTATACAGATGTGGATACTGAGCCTCGCGGCTTATATGATTGCTCA
CAGTAACGTGATTTATTAATGACGGAATTGGCTTGAGCCCCCAGAACTCATAATCCTCAG
ACTTATGCTTCCAGGGTATACAAATACTTTGAATATGTATCTTAATGTAATTAATCGTAC
CAAATATATTATTACT

Sequence 1118

GCGTCCGTTGTCATCTATTTACTTTACATATGTCATAAACCTAACACTACATGGTCATTT
TTGTTTAAACAGTCAATTACCTTTTAAAGGGATTTGAATAATAAGTCAAAATCTAATACA
TTAACTGTGTAGTTAGCATTTCTGGTGCTCTTCTTTCTTTCTGTAGATCCATACTTCCA
TCTGGCATTATTTTCTACTGCCAGAAGGACTTCCTTTAACATTTCTTGATGTAGTATC
TGCTGGTGATGAATCTTTCAGCTTTTGAATCTTTTGTCTTTGAAAGGTATTTTCCCT
GAGTATAGGTTAATAGCTTTTCTTTTTCAGTACTCTAAAGATGTTGCTCCAGGCCAGGCG
CGGTGGCTCACTCCTGTAATCCCAGCACTTTGGGAGTCTTGAGGTGGGCAGAACCTTGA
GGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCGTGCTTCTAAACATAT
TAAAGAAAAAAAAAGA

Sequence 1119

NCGTGACATGCTGGCTGCTAGTNAGCTCCCCCATGATTGTGAGCTTCCGAGCCCTCACTA
GAAGCAGATACCACCCACCACCATGTTTCTTTAAGCCTGCAGAACTGNGAACCAATT

TABLE 1
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AAAACCTCTTTTCTTTATAAATTATCCAGCCTCAAGTATTTATAGCAACACAATAATGGCC
TAACACAACCTACAACCTCTCTATATGTATTTGTGTGTATTTAAAACATGCAGGAAATAAC
ACAGAATCCAAGGCACCCAAAACCTATTAAAAAATGGAATCAAGAATTCATATGCCATTA
TGAAATTAGCCAGTCCTAAAATCTGACCTCTCTGCATTTTCACATTATTCTCCTCTCTCT
ATCCCTGCCTTCCTCCCTCCCTTCCTCCAACCTGTCAGAATTGTCCTGTAATCAAACATGT
TCACATCACAGCTTTTCATTTTCTATTTCCAATCAATTGACCAGTCTAGCCAAGTAGCAT
CCTGGATCCCGTATTACATATTCTAGGACAGGAAGCCAGATTTT

Sequence 1120

AGCTCTTTAGCAGGAGACAATTCTTAACTTAAATTAACTGAAAAAGCCACAGAAAAAA
GGGTTTGACACCCTAAAGCCAGTGTCCAAATGAACGCTACGGTTGNCCTCATAGGTGTGT
TATGAATGTTTACCCTGACCTCCTAGAAGAAAAGGAAAAAGAAAGGAAAGAGAGAGGGGAG
AAGGTGAGGGGAAGGGGGGAAGAAAAGAAAGGAGAGAAAAAGAACAGAGAAAAAACAGGG
AGGGAGGAAGCTGGGGGAAGGAAAAAGACCATTGCTGACTCCGTTGTTTTATTCCCGAA
ATGATTCAATACCTCAAGAAGATTTCACTCCAGAAGTGTACAGAGTTTTCTCAACAACC
TTTGCCCTCGACCTGAAATTGATAACATCTTTTCAGAATTGTAAGAGTACACATTTTAAG
CCATATCTTTTTCAGCTTGCAATTGATTCTCAGGTGGCTAGAGCAGGACTTGGAGTGGTAA
TTGGAGATGGAAGAACATCATACACTGTGTCTAAA

Sequence 1121

CGGCCGAGGTACTATAATGGTCCCCATCTTAATTTGAAAGCGTTTGAGAATCTTTTAGGA
CANGCACTGACGAAGGCACTNGAAGACTCCAGCTTCCTGAAAAGAAGTGGCAGGGACAGT
GGCTACGGTGACATCTGGTGTCTGAACGTGGAGAATTTCTTGCTCCTCCAAGGCACCAT
AAGAGAGAAGATTCTTTGAAAGCTTGGACTCTTTGGGCTCGAGGTCATTGACAAGCTGC
TCCTCTGATATCACGTTGAGAGGGGGGGCGTGAAGGTTTTGAAAGTGACACAGATTCCGAA
TTTACATTCAAGATGCAGGATTATAATAAAGATGATATGTCCGTATCGAAGGATTTCCGGC
TGTTGAGCCAAAGACTGCGTTACCTTCAATCGTTTTTACCCAACAAAAGTAGACAGCC
ATCCTATGTACCTGCCCG

Sequence 1122

CCCTTTCGAGCGGCCNTNCGGGCTTNTACGCGGGGGCAGCGGGAAGCTCGCAGCAGCTGG
GGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATACACCCAACCTGGGAGAT
GAGGAAACAGCAACCCAGAGAGGAGAATAACCCACACAGGATCATTTCGCGAAGGAGCA
AGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAACTTACTGCAGCTTGAAGGAGCCA
ACCATGGATTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTACTATCAATACCAATC
ATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCGATCTATGTTTAAACACCATCTTACTA
ACCATATTGCTATGGTGGTATACACTGCCTATGTCTTTATTCCAATCCACATTCGCCTG
GCTTGGGAATTTTTCTCAAAAATAT

Sequence 1123

CCCTTTCGAGCGGCCGTCNCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACC
ACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGG

Sequence 1124

CCCTTATTTTNGGCNTTNGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTAT
AGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAAACTGCA
AAAAATTGCCAAAATGCNACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTT
GGCAATTCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGG
TTTGGAGTCTGGAAGCCTNATCCCTTCANCATCAAGCTGGAATGGGGAATGAAGAATGGA

TABLE 1
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NATGTGGTGCCCACTAGGCTACTGNTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTA
TTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTA

Sequence 1125

CCCTTANCGTGNTCNCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCAC
TNTATAGAGGGTGGGAAAATAAACANAAATCAAGGGAGAAAAGAAAGATGAAAGACAAA
CTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCGTCAAGCTGGAATGGGGAATGAAGA
ATAGAGATGTGGTGCCCACTANGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGT
TGGTATTCAAAATATGTAATGGAAGTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATTGTAAACACCTGAATTG

Sequence 1126

CCCTTTCGAGCGGCCGCCGGGCGAGGTACTTTTTTTTTTTTTTTTTTTTTNNGGACTTGCG
ACAGTTCACCTTTTACTCTCATTGGTAAAATCTCCTTTTAATTATTAATAAATATTGATA
AATTTATTAATAAGTCTTNATTCTTTTGTAATCAGAAGAGGACATTAATGTTGCGTG
TCTTGACTGTCTTTTTGCTTTGTAGATTTATTTGTGCTAAATGAGAACGATATGCATG
TTTGTGNTTGATTTTTCCAGAAGCAGTTACTTTAATTCTTTTTTAAGNGCTGATTTTGT
TTTTGCTTTAGGCATTAGTTTCTTCTCCTTTATAGNTTTTTCAAAATCAATTAATTCCT
TTATTTGTTTTGAAAGAAGTAAATTTGGGGTAATTTTTCTTATCACGCCCAATATGAAG
AGTTAAAAAATTACCAACTGATTGCATTTCTTACTTAATTTGCAATCGATTTTACTT
CATCAAAAAAAGAATTTAANAATTAATTTACCTTGTTTCAGGTCTTGGAATTTNCACGCC
CTCTAAGACGAAGAGCCACTTTTACTCTGCGTATCTAATAAAAATTCTTTGGCTTTTTTT
GCTT

Sequence 1127

CCCTTAGCGTGGTTCGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCAC
TTTATAGAGGGTGTAATAAATAAACAGAAATCAAGGGAGAAAAGAAAGATGAAAGACAAA
CTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGA
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TGGTATTCAAAATATGTAATGACTGGTATGGCAA

Sequence 1128

CCCTTAGCGTGGTTCGCGGCCGAGGTACATGCTANAAAAACATTANCACAGATACGACAGAG
TGTGGTTTTTTTTAGAAATGGGTAAATTTCTCTCCAGTATCCTTCACTTGTATGAGA
TATTTCTCCTCTCCTGTTTTACAAACCAAGAAATCCCCAGGTAGGCCAATCCCAGAGGT
GCCATTTAGCAGTATGCAGCAGCCCAGTTTCAGCATAACAAAACATGCCTTGGTAGTGGC
TCTCTCATGCAATAAAAGAAAGCTTAAGAAATTCTTGTTGTAGGTGGATTAGGCAAGGC
TGCCATTAGCTGGTATAAGCTAAAAGTAAAAAATCAAAACGCTCAAGAAAACGGACACA
ATTTTGGAATGATTAAGATGTCTTTATAAAGTTTTTTCAAGACTTCATTCTAAATACA
CAGAATAAAAAATGGGTGTCAGCTCACTTGTAAGACACCAACCAGATTTTCCTTATACTG
TCTCAAAATTTAAGATCAATTTCCCCAGAAGGTGTNCAATGCATCATAAATGGCCCTT
TTTTGAGGATGGGAGAGGAAGGGTTGGGCAGGATGGAATATTAATTTGTACATGGATAAA
CATGCCAAGACTGTTATCCAATCTAGATAATTTATATACATTTTGATGACTTAAGGAAA
CAAAGCAATCATTTGGTGACAGCCTAAAAAGCNTGACCNTATTTAACATACTTAGGAAT
TTTTTNGG

Sequence 1129

CGTTCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCCTTTATAGAGGGTGTA
AAATAAACCAGAAATCAAGGGAGAAAAGAAAGATGAAAGACAAACTGCAAAAAATTGCCA
AAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCCTC
AGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTG
GAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCC

CACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATG
TAATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCATACCACTGGACAGGGTTA
TGTTAACACCTGAATTGCTGGGTCTTGAAGAGAGCCCAAGGAGTTCTGGGAAGAGGGACC
AGATTGGGGGGTAGGGTACAGGGCTTGGGTGATAGAATTATTTCTCGAATGACTTTCTTG
AGTGCCAAATTTGAACGTAAACATTTGCTTANTCACCTTTAGNGGAGTAATCTCCTGGGCT
TGGTTCTATATTTATATAAAG

CGGGCAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCCTA
CCAACTAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATT
ACTCATCATGCGATAAATACTATATCCGGTATTAGCTATTGGTTCCAATAAGTTATCCC
CAGTCTTAAANGTAGGTTAAGTACCTCNGGCCGGCCACCGGGNTGGAGCTCCAAATTNGC
CCTATAAGTGAGGTGCGATTTACGCCCCGCCTCACTTGGCCCCGNNGTTTTACAACCGTCC
GTNGACTNNGGAAAAACCCCTGGGCGTTTACCCCAANCTTTAATCCGCCTTGGCAGCACAA
TCCCCCTTTTCGNCCAGGTTGGCGTNAATAANCGAAAAAGGCCCGGAACCGAATCGGCC
NTTTCNAACANGTTNGCGCCAGTNCTGGAATNGGCNAAATGGGGACCCNCCCCTTGTT
AACCGGGGNGCATTTAAACNCCGGCCGGNTGNTGGTTGGNTTACCCCCCAANNGGTGAC
CCGNNTTCAACTTTGGCAAGGGCCCCCTAANGGCCGNTTCTTTTGNTTTTTTC

[illegible]

AGCTCACTCAAAGGGCGGTAATACGGGTATCCACAAGAATCAAGGGGATAACCGCAGGA
AAGAAACATGTGAGCAAAGGGCCAAGCAAAAGGGCCAGGAACCGTAAAAAGGGCCCGCG
TTGCTGGCNGTTTTTCCATAGGGCTCCCGCCCCCTGGACCGAAGCATCAAAAAATCG
ACGCTCAAAGTTCAGAGGTGGGCGAAAACCCCGGACAAGG

CCCGGGAACAAAGCNGCAACCGNGCCCCCCTCCAGGTCNACGGNNTCGANAAGCNCGA
AAACCGAATTTTTGNAGNTTTNGGGACCCACTANTTNGNGAGCGGGGGCCGANNNAGNG
CGGC

[illegible]

GGGAGTNNGGGAGCGGCCGAGGGGCCAAANGANCCGCGAAGACAAGGCCATCCACCACTNN
ANAGAGGGGGNAAAAACAAACCAGAAACCAAGGGAGAAAGAAAAGANGAAAGACAAACNG
CAAAAANNGCCAAACCGCAGCANCAAAAAAANGGACGACANGCNGAGGCCANNGCCAAAGNC
ACGGCANACCGNCAGGAGCCGAANGAAAAAAGCAACAAGCAAGANGAAGACNCTGAGAG
GGGCNCGGAGGCCNGGAAACCNCAATCCCTNCAACAACAAAGCNGGAANGGGGGGAANGAA

GAANCAGAAGAAGGGGGCGCCACNAGGCTACNGCNGAAAGGGAACCGAAAAACCCCNCA
CCAANNAGGNATNCAAAAAANNGGAAACGGACCGGGNCANGGCAAAAAAANGGAACCAA
GACACCGGGCCCANACCACNGGACCANGGGNAANGGAAACACCCCGGAAATGGCAGGGN
CCCCGAANAGAACCCCAAGGGAGCCCAGGGAAGAGGGACCCAAGATGGGGGGGGAAAGGC
CCACCGGGCCNGGGGNGAAANAACAAAGCCACCGAGGGCCAACCGNAAGNGGCCAANNGA
ACCCGGAACNANAAGGCNNAANCCACCCTGAAGNGGGAGGAAAAACCCCGAGGCNGGGGG
CCAAANANNAAAAAAAGCNGCCAAAACCCCAA

NTTTAATTTTTTGCAGCCCGGGGGANCCAGGGGNAGGGNGAGCCACCGCGGGGGAGCGC
CAANCGCCCNACAGCGAGNCGNAANACGCGCNGCCACNGGCCCGCCGNANAAACAACGN
CGAGACGGGGAAAAACCCGCGCNCACCCAACNGAAACNGCCANGCAGCACAAANCCNCAAN
CGCCAGCGGGCGGAANAGCGAAGAGGCCNCGCACCGAAGCGCCANCCCAACAGNGGCGCA
ACAGAAAGGGCGAAA

[illegible]

CACGCGTCCGGAAAGGAGGGGAGGGGTGGGGCGGGCCGGATCTGCTCGCAGGCCGCACCC
 GCCTCCGGCTGGATGCTCAGAGTCTCGCCCTGATGGCCAGACTGGAGTGCAGNNGCGTGA
 TCTCGGCTCACTGCATCCTCCACCTCCTAGTTCAAGTGATTCTTCACCTCAGCCTCC
 CTCCAAGGAGCTGGCATCACAGGACAGGCACGGAGACTCACGCCTGAAATCCTAATACT
 TTGGGAGGCCGCGGCAGGAGGATCACCTGAACCCAGGAGTTTGAGACCAGCCTGCCAACA
 TGATGTTGTTATTCATGAGGACCAATGGGTTGGCGAGACAGTACTACAATCAACATTTAG
 CAGTCAGTTATTAATCTTGGGAGTTATTCATCTATTCAGCCTGAAGAATATTCCAGTGT
 AGTTAGTGATGTTGTACTTCAAGACTTACTGGCATATGTGTNCTCAAAACATTCC

TTACCCCGCGTCCGGGTAACAAAAACAAAGATCGTTTGTTCTGGAACAGGTA AAATGGT
AATCAAATAGATTGTGTTCCAGGAGTGCAAAGGTGGCTTAATATTCACAAATCAGTTGCT
ATTGTACACCACCTGTAGAAAAGTAATCTGGCATGCAGAACATTCTTATGGTAAAGTTAA
TGTTCATTTATGATCTTAGCAAATGATGGATTGAAAGGGACTTCCTTAATTGCATAACA
GACTTCAACAAACAGTATGATGAAATAGTGAACATTTCTCCTAAGATTATAAAAAATAAGA
CAAGGATATCTGCTGTCAATGATTTTTATTACGATTGTTCAGAAGGACCTAACCAGAAAA
CTAATGCAAGAAACAGAAACAAAAGGCATAAAGATTANAAAAGAAGTAAATTTTTAAAAA
AGAAAAAGAATATAAATCTCTATTTGCATATGCCATGAGTAAATTTGGTAAGTTCCTGC
ATAAAAGTTATGCAAAAAGCATTTTTTTTGATATACCAGCCAAAAATCAAGGGAAATGGAA
AA

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACAAGGCCATCCACCACTTTATAGAGGGTGAAAAATAAACAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTCATGTCTTGGCATTCCTTCAGGAGCTGAATGAAAAAATGCAAC

TABLE 1
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AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT
GGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTC
TTGAGAGAGCCCAAGGAGTTCTGGGGAGAGGGACCAGATTGGGGG

Sequence 1141

ATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAAAG
ATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAA

Sequence 1142

ATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAAAG
ATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAG

Sequence 1143

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCACTCTATCCATCGTGGATA
GAGAACTGAAGCTCTCTAAGACCCTGCAGCTGGGAGGTGGCAGAGTCAATGGCAGCCC
TCAGCCCTATCTGCCCTGACATGGCATTCTCCCATTTCTCACCACCGAACCCTCTAAAA
TAACAATGTGTGGGGTCCTTGGCTGAGAGACTTNCCTTTTGGGAATCAATCTGAATGTAT
GATGACAAAGAAACAACCTTTTGCCTTATACAACCTTCTGGTTAGATTGAGGCACCAAGC
AGGACACTTCTTTGTGGCGCTCCAAGAATCTTTCAAATCTTCATCACCAATAACAAATC
TTTCTGCTTCTCTTAGAGCATCTTCTCCACAATTCTCACCCTCAATTAAGAGGCACTGGA
ACACTTTCCAGCGGACAGGGTTTGTGCTTTGATCTGTTCCGTCATGTCTCTTCCACGT
TGAAACGATTAATGACAGAATTTTTTTTGGAGGCGACTCTATTAATCCCTACACCACCTN
CTCAGCTTTTGAAGGGTTTNCACATGGGTTCTTTT

Sequence 1144

GNAGCTCCCCGCGGTGGCGGCCGAGGTACGCCACCATGCCTGGCTAATTTTTGTATTTTT
AGTGGAGACGGGTTTACCATGTTGGCCAGGCTGTTCTCGAACTCCTGACCTCGTGATC
CACCCACATTGCTCCTCCCAAGTGCTGGGATTACAGGCGTGAGCCACTGTGCCATGAGGAT
TAGTAAAGTGCACTCATGGTAAGTAAAAAATTTGTTTTATGTTNATGCTGATTATATGA
AGGTCATCATAGCTTAGACACAATCAAACCCATGGGGAACATCTTTAGAATTCATTTTT
CTCTTTTCTTACAAAAAAGTAAATAGGTAAAATGGAAAATAGAAGACAACCTATCCTAT
CCTGGATGAGACACACACATATTTAAATTGAATTATAGACTTAAATTTAAGTAGGGANT
TTTTTTTTNTGNGNAACAAAAGTTTNCAAAAACCCAAACTTTTNAGAATCACCCAGTT
NTTGGAAAATATGATTATGAAAGCAGACTTTTTGGATGGGNGCTTAATGACATTTAGGCG
ACATTTAAATGCCCTAGGNGNGGGAACACTTGAAATTGCCANCTAAATTAATGACC
CTTTTAATTTGCCTGGACAACAAAAAANTTCCATGATTTTGGCTTTTTTTGGAACAANN
GANNAAGAAAAATTTTTTTTTTAG

Sequence 1145

CNATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCTTCANGAGCTGAATGAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA

TABLE 1

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ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGC

Sequence 1146

TTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCACGGTACTGTGTCAACAT
GCAAGGCCAGGTGGCCGTGAGGAATGTCCAATGACAGGCTCTATCAGTCATGTCCTGGT
GCAGCTCCCACATGTCTTCCAGAGGATGGAAGCTGAAAACCTAGCTTCAGTGATTGATGC
CAGGTTTAACTTTTTGTGAACAAGATTTGCCACAGTATCGTGATGCAGTCATGTCTCA
CACGCTCATCTATATCCCCTCCTACTTTGACTTCGTGCGTCTTCGAAATTACTTCAAGAA
GGAGGAATTGAATTTTACCCACATCTGCGAGTACCT

Sequence 1147

CCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAATAAATAAACCAGAAATCAAGGGAGAAAAGAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTNTTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGGGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGGGGTAGGTCC

Sequence 1148

TTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGAGTTCT
GCGCAGCTTCCCGAGGCTCCGCACCAGCCGCGCTTCTGTCCGCCTGCAGGGCATTCCAGA
AAGATGAGGATATTTGCTGTCTTTATATTCATGACCTACTGGCATTGCTGAACGCATTT
ACTGTCACGGTTCCTCAAGGACCTATATGTGGTAGAGTATGGTAGCAATATGACAATTGAA
TGCAAAATCCAGTAGAAAAACAATTAGACCTGGCTGCACTAATTGTCTATTGGGAAATG
GAGGATAAGAACATTATTCAATTTGTGCATGGAGAGGAAGACCTGAAGGTTGAGCATAGT
AGCTACAGACAGAGGGCCCGGCTGTTGAAGGACCAGCTCTCCCTGGGAAATGCTGCACTT
CAGATCACAAGATGTGAAATTGCAGGATGCAGGGGGTGTACCTTGGCCCGCTCTAGAAT
AGTG

Sequence 1149

TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGA
AGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAAATAAACCAGAAATCAAGGGAGAA
AGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGC
TGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTG
GACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCT
TGAGGGGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTGGGGG

Sequence 1150

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTG
TGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAAATAAACCAGAAATCAAGGGA
NAAAGAAAAGATGAANGACAACTGCAAAAAATTGCCAAAATGCNACTTTCTAAAAATGG
AGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATTGAAAAA

Sequence 1151

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTG
TGAGGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAAATAAACCAGAAATCAAGGGA
GAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCTAAAAATGCGACTTTCTAAAAATGG
AGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCA
ACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATC
AAGCTGGAATGGGGAACGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGG
AGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGA

TABLE 1

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Sequence 1152

CCGCGGTGGCGGCCGCGAGTTACCTGACGTATGACAACCCAGATATCTTGAAGAGGGTGTG
AGGATCAAGATCAAATGTGTTTCATGAGGTTTAAAACAACCTGCCAAGGATGGCCTTTTGCT
GTGGAGGGGAGACAGCCCCATGAGACCCAACAGCGACTTCATTTCTTGGGCCTTCGGGA
TGGAGCCCTCGTGTTTCAGCTATAACCTGGGCAGTGGTGTGGCATCCATCATGGTGAATGG
CTCCTTCAACGATGGTCGGTGGCACCAGTTAAGGCCGTTAGGGATGGCCAGTCAGGAAA
GATAACCGTGGATGACTACGGAGCCAGAACAGGCAAATCCCCAGGCATGATGCGGCAGCT
TAACATCAATGGAGCTCTGTATGTGGGTGGAAT

Sequence 1153

GCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACGAACTAAATTTTTTAACTTTA
TTTGCTGTAAATTCTGTGAAGTTTCAGTTATCTAAAATAAATATACACAAATATGAAAT
ATAATGTTTCAGATTGCAAGGTAATATGTAATAGTAGTGTGTAAGATACTCTTGCTA
ATATTAAGTAGTAGTATTTTGATTTGTACAATGTCACCCTCCAGCAACAAGAAGACAA
GCTACTGAATCAGTGTCCCTTTATTACTATGGCATCAAAGATTTGGCTACTGTTTTCTTC
TACATGCTAGTGGCGATAATTATTCATGCCGTAATTCAAGAGTATATGTTGGATAAAATT
AACAGGCGAATGCACTTCTCCAAAACAAAACACAGCAAGTTTAATGAATCTGGTCAGCTT
AGTGCGTTCTACCTTTTTGCCTGTGTTTGGGGCACA

Sequence 1154

GAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTA AAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGCTTTGGCATTCCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGGGGT

Sequence 1155

TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAATGTGTGAAGACAAGGCCATCCA
CCACTTTATAGAGGGTGTA AAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGA
CAAACCTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTT
GCATGTCTTGGCATTTCCTTCAGGAGCTGAATGAAAAATGCANCAAGCANATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCAC
CAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGG
CCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGG

Sequence 1156

CCGCGGTGGCGGCCGCGGCCGAGGTACATTGGCACGTACGATGTCTTGAGTTTCATTG
ACTAGGTGGCAGCCTGCATCGTTCCACTGCAAAATGACTGAAATCCCAAAACACACAATGA
GGCTGGCTCAGGTTTGACTCTATCTTGAAAAAATAGGAAAACCTTCATTTATGGAATAG
TTTTGAATAACCGTGGATATCACAGGTCCATTGACCTGAGCATTTCATTTTTGGAAACG
GGTAGAATGTTCCCCAGAGTCAACGAGGCCATGCTGATAATAGTTTCTGGAAGGGATCTC
TGAATTGGTCTGACCCAATTAACACACGGCCTCTGATGGGAATAGATGTATTTTGGGGA
CACATTTTAATCTGATAGCTGTAACCCCTTTTGAGTTGGCTTTTGTTCACTGGAATCCCT
TTCCAGTCAATGAATTTCCGAGAAAAATTGAGGGAAGAGCTGTCTGGAGGCACCAGAGTG
CTGATGTTTTCT

Sequence 1157

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCCGAGGTACGCGGGGCAGTGG
GAAGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGA
TACACCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCACACAGGA

TABLE 1
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TCATTTCTGTAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAACTTAC
TGCAGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTC
TACTATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCGATCTATG
TTTAACACCATCTTACTAACCATTATTGCTATGGGTGGGTATACACTGCCTATGTCTTTA
TTCCAATCCACATTGCGCTGGGCTTGGGAATTTTCTTCAAAAATATGTGGATATCACAG
GNCCTCGGCCCGCTCTAGAACTAGTGGGATCCCCCGGGCTTGCAGGGNAT

Sequence 1158

AGGGCGAATTGGAGCTCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGCAGTGGGA
AGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATA
CACCCAAGTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCACACAGGATC
ATTTCTGTAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAACTTACTG
CAGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTA
CTATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCCGATCTATGT
TTAACACCATCTTACTAACCATTATTGCT

Sequence 1159

GGGCGAATTGGAGCTCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGCAGTGGGA
GCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATAC
ACCCAAGTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCACACAGGATCA
TTTCGTGAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAACTTACTGC
AGCTTGAAGGAGCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTAC
TATCAATACCAAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCCGATCTATGTT
AACACCATCTTACTAACCATTATTGCTATGGGTGGTATACACTGCCTATGTCTTTATTCC
AATCCACATTGCGCTGGCTTGGGAATTTTCTCA

Sequence 1160

CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCCTTTATA
GAGGGTGTAAAAATAAACACAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAA
AAAATTGCCAAATGCGACTTTCTAAAAATGGAGCANATTCTGAGGCTTTGCATGTCTTG
GCATTCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTNAGCATCAAGCTGGAATGGGAATGAAGAATAGAN
ATGTGGTGCCCA

Sequence 1161

ACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCGGAAGGTGGGTGACGTGCGGA
TCTTCTTCTTTTTGTGGCTGTGGACACCTTTCAACACTGCCTTCTTGGCCTTTAAAGCCT
TCGCTTTGGCTTCAGCTTTAGGAGGGGCAGGAGCCCATCGCAAAACCACGCTGCGGAGAG
AGGGGCGGGTAATGTAGCCCGGTTGAACATGAACCAGAAGGAAAATGGTTAAAGCTGAGG
GCACTAATTCTTACAGGCCCGGGGACATGGAGCTCCAACCAGTGGATGCATGTAGCTTC
CCAGAACCGAATGTCTGCCCGCGTACCT

Sequence 1162

CCGCGGTGGCGGCCGAGGTACCACTCTATCCATCGNNGGATAGAGAACTGAAGCTCTCTA
AAGACCCTGCANCTGGGAGGTGGCAGAGTCAATGGCAGCCCTCAGCCCTATCTGCCCTGA
CATGGCATTCTCCCATTTCTCACCACCGAACCCCTCTAAAATAACAATGTGTGGGGTCTT
TGGCTGAGAGACTTCCCTTTTGGGAATCAATCTGAATGTATGATGACAAAGAAAACAAC
TTTGCTTTATACAACCTTNTGGTTAGATTGAGGCACCAAGCAGGACACTTCTTTGTGGCG
CTCCAAGAATCTTTCAAATCTTTCATCACCAATAACAAATCTTTCTGCTTCTCTTAGAGC
ATCTTCTCCACAATTCTCACCCTCAATTAAGAGGCACTGGAACACTTTCCAGCGGACAGG
GTTTAGT

Sequence 1163

CTATAGGGCGAATTGGAGCTCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGA
CAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGA
AAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAAATGCAACAAGC

TABLE 1

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AGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGA
AATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAGATTGGAC
TAAGACACTGGCCATACCACTGGACAGGGTTATGTAAACACCT

Sequence 1164

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCNNGGCACGGTNCCAAATGAAC
GTGTGAAGACAAGGCCATNCACCACTTTATAGAGGGTGTAATAATAACCAGGAAATCAA
GGGAGAAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAA
ATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAA
TGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAG
CATCAANCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAA
AGGGAGCTGAAATTCCTCCACCAAGTT

Sequence 1165

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCATTTTCTTTNTCCTGT
CCATAATCTTCTCCACCACGTGGCTGTGTNCAAGACTCTCTGAACCTNCTCTGGCTCA
GGAGGCTTNTAGATNTGTGAATTGTCTGCTCAGTNNACTCCATTAAATTNAATNTGGCC
AAGAANTTTCTTCTAACAGNGGTATTGATGACCATTATCCTTCAACCTAAACCTGCTC
ATTAA

Sequence 1166

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACTTTATAGAGGGTGTAATAATAACCAGAAATCAAGGGAGAAAAGAA
AAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGAT
TCTGAGGCTTTGCATGTCTT

Sequence 1167

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGCGGCGAGGTACAACAAGCGTTTGT
AATGTTTCCCAAATATTAGCTTTGAAATCCAAATGTCAAGCAGGTTAAAGTTCANAAAC
TATAAATGTAATTGTTAATAAAACAATGGATGAAAAAAGTCATTGAAATTTTTTCTACT
TGGATTAAGAACATAAATTAAGTGAACCTGCAAAAAATAATATTAGTTTGATAAGTAAA
ATAAAACAACTAGATATATTTTGAAAAATAAAAAACAAATGAAACAAAAATAAAATTTAGG
TAAAGAAAATTCACGTAATTTGTTGTAGCTATATTTTTGTATAATTACAAAAGTAGA
AATAATAGCTCATAAAGCAAAAACAAAATTTATTCTATGTTCTTTTTTTCAGTCAATTCA
GAATTTTAGCTTCATATTTGAAGCATTTTTTCTAATTTTGTGNGAATTTGAATTTGT
TTGCGGATTTTGATTTGCCATAAAAATATTATATTNTATTTAATTATTAATCTTCGTC
AGCTTTAATTGCTCTTCTTTAAATTTGATCTGAAAT

Sequence 1168

CCGCGGTGGCGGCCGAGGTACCCTTGTCCTCTTCTTCAGTGACTTAAACAATTCCAGGA
TCAGAAGAGAAGCCAACGTGACATCCTCGATAAACTGGGGATAAGCTGAAGTTCTGTCT
GTTACGAAGTGGTTGAAAAACAATTCGAGATCCAGAAGTCCCTTGATGGGTTCAACCAT
CCAGGTGTTCAAAAAAATCAGAGAATCTTTTNAGGGGGTGGNCGCNTTAACCTTTTN
NGGTTNANTGAAAATCCCCCCCCCTGNTTTTTTTTGAGAGGTTNAAAAATTTTTTTTNA
AAAAAAACCCCCCCCCCNNGGNATTNTNANTTTTTTTTTTNNNNNCCCCNNCAAAAAATT
TTTTTTAACCCCCCCCCCNAAAAAAAAGGGTTTTTTTTTTTTTAAAAAACCCNCGN
TCNCCNCCNCCANAAAAAAAANGGGGGTCCCNTTTTTTTTTNTNCCCNCGGN
TTTTTTTTTTTTNTTCTNNNNNNGGGGGGGGGGAAAAAAAANAATTTTTTTTTT
TGGNNGGGGGGGNNGCNCCCCNCCCCNCGGGGGGGGNGGNTTAAAAAAAANGNCCCCC
CCNNGGGGGGAAANNANTTTTANTNNNTCCCCCCCCCNCGGGGGGGGGG

Sequence 1169

CCGCGGTGGCGGCCGCCGCGGCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAATAATAACCAGAAATCAAGGGAGAAAGAAAAGATGAAGACAA
ACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA

TABLE 1
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GAGGGGTTTGGAGTCTGGAAGCCTCATCNCTTCAGCATCAACTGGAATGG

Sequence 1170

CCGCGGTGGCGGCCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCANATGAAGACTCTGA
GAGGGGTTTG

Sequence 1171

GNGGCGGCCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGG
GTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAA
TTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCAT
TCCTTCAGGAGCTGAATGAAAAATGCAACA

Sequence 1172

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACCATCTAGGTCAG
TTTAAGAAGAGTCAGCTCAGAGAAAGCAAGCATAAGGGAAAATGTCACGTAACTAGATC
AGGGAACAAAATCCTCTCCTTGTGGAAATATCCCATGCAGTTTGTGATACAACTTAGTA
TCTTATTGCCTAAAAAAAATTTCTTATCATTGTTCAAAAAAGCAAAATCATGGAAAAT
TTTGTGTCCAGGCAAATAAAAGGTCATTTTAATTTAGCTGCAATTTCAAGTGTTCCTCAC
TAGGTGGCATTTAAATGTCGCCTGATGTCATTAAGCACCATCCAAAAAGTCTGCTTCATA
ATCTATTTTCAAGACTTGGTGATTCTGAAAGTTTTGGTTTTTGTGACTTTGTTTCTCAGG
AAAAAAATATTCTACTTAAATTTTAAAGTCTATAATTCAATTTAAATATGTGTGTGTCT
CATCCAGGATAGGATAGGTTGTCTTCTATTTTCCATTTTACCTATTTACTTTTTTTGTAA
GAAAAGGAGAAAAATGAATTTCTAAAGATGGTCCCCATG

Sequence 1173

AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC
CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCA
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG
GGCTCTGTATCACGCCCTGTGGATCGTCACTGCTGCACACTGTGTTTATGACTTGTAC
CTGCCCCG

Sequence 1174

AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCNAGGTGTTACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC
CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCA
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG
GGCTCTGTATCACGCCCTGTGGATCGTCACTGCNTGCACACTGTGTTTATGACTTGTAC
CCTGCCCCG

Sequence 1175

AGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTNNAGGTGTTACAGCTGCT
TCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTGCC
CAACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGGG
CAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCA
TGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAACATGTCC
TTGCTCTCGCAGTGGCCCTGGCAGGCCAGCCTTCAGTTCCAGGGCTACCACCTGTGCGGG

TABLE 1

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GGCTCTGTCATCACGCCCCCTGTGGATCGTCACTGNTGCACACTGTGTTTATGACTTGTAC
CTGCCCCG

Sequence 1176

CCGGGCAGGTACAACAAGCGTTTGTAATGTTTCCCAAANATTAGCTTTGAAATCCAAATG
TCAAGCAATTAAGTTCAAAAACTATAAATGTAATTGTTAATAAAACAATGGATGAAAA
AAGTCATTGAAATTTTTCTACTTGGATTAAGAACATAAATTAAGTGCAACTGCAAA
AATAATATTAGTTTGATAAGTAAAATAAAACAACTAGATATATTTTGAAAAATAAAAAAC
AAATGAAACAAAAATAAAATTTAGGTAAAGAAAATTCAACGTAATTTGTTGTAGCTATATT
TTTTGTAATAATTACAAAAGTAGAAATAATAGCTATAAAGCAAAAACAAAATTTATTCT
ATGTTCTTTTTTTCAGTCAATTCAGAATTTTAGCTTCATATTTGAAGCATTTTTTTCTAA
TTTTGTTTGTGAATTTGAATTTGTTTGGGATTNGATTGCCATAAAAATATTATATT
TATTTAATTATATTAATCTTCGTCAGCTTTAATTGCTCTTTCTTTAACAATTTGATCTGA
AATTTGTTTGGTGTTATTTCATAGTGATCAAATTGCATTTGATAAGTTCCACGACCTGA
TGTCATAGACCTTAATTGTGTTGAGTATCCAAACATTTT

Sequence 1177

TAGGGCGAATTGGACTCCACCGCGGTGGCGGCCGCCCGGGCAGGTACCTACGGAAATCCT
AACTACCACTGGCAGGAACTGCATATNTTCTGGTTTACATGAAGANGGAGGGCTAANGG
AAATGCCCAAACCTTCAGAGATTGACACCGCTGTCATTNTCCATNTCNGTTCTGGAAT
CTACCGGGAGTNTTNATAAGAAGANTTTTGCAAATNGAGGGAAGAAGCAATTGTTTTCAA
ACTATATAACTGGAGNCCTTAATTTATAATTAGGGGATATTTAATCAAAAATATNGTAAA
CCATGGAGGGCCCCCTCAGNGTNTCGGATCAGGTTCAAGAAATNGAAATGNTTTTCACCC
AAGNCANGACCCCGGCCATGTGGGCATGNTCCGGGTNCCTGGGGGTGGCNTCGNCTGGCT
TGTGGCGAANGAACAATTAAGCCCCTTTAAAGTTTATTGAAGCCCTGNGGGGAAACTTTA
AGGGGGTTTCCANAGTTGGGGGANGAAGCANTNGGNNAGTTGGNGAAGGGCATTTTGGGG
GGG

Sequence 1178

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGC
CATCCACCACTTTATAGAGGGTGTAATAAATAAACAGAAATCAAGGGAGAAAGAAAAGAT
GAAAGACAACTGCAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCC
TCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGAC
ACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCT

Sequence 1179

CCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAATAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAATTGCCAAAATGCGACTTTNTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGG

Sequence 1180

CCGCGGTGGCGGCCGCCCGGGCAGGTACCTATTGCCAGGAAGATAGGCAGCTCATCTGTG
TCCTGTGTCCAGTCATTGGGGCTCACCAGGGCNCNCAACTCTCCACCCTAGACGAAGCCT
TTGAAGAATTAAGAAGCAAGAGCTCAGGTGGACTGAAGGCCGCTATGATCGAATTGGTGG
AAAGGTTGAAGTTCAAGAGCTCAGACCCCTAAAGTAACTCGGGACCAATGAAGGCTTTA
TACAGCAGGAATTTAAGAAAGTTTCAAGAAAGTGATTGCTGATGAGGAGCAGAAGGCCCTTC
ATCTAGTGACATCCAAGAGGCAATGACCACAGCTCATGTGACTGAGATACTGGCAGACA
TCCAATCCCATGATAGGTTGATGACTCAAATGGCCCAAGCCAAG

TABLE 1

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Sequence 1181

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGG
CCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGA
TGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATG
AAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATG
GGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTC
CTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGA
CACTGGCCATACCACTGGACAGGGTTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGA
GCCCAAGGAGTTCTGGGAGAGGGACCCAGATTGGGGGGGTA

Sequence 1182

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCCGAGGTACCAAATGAAGTGTGAA
GACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAA
GAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCA
GATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAA
GCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGC
TGGAATGGGGAATGAAGAATAGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGC
TGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTG
GACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAA

Sequence 1183

TCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAA
GACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAA
GAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCA
GATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAA
GCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGC
TGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCT
GAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGG
ACTAAGACACTGGCCATACCACTGGACAGGGTTTATGTTAACACCTGAATTGCTGGGTCT
TGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTGGGGGGTAGGTCCCGGGCTTGG
TGATAGAAATATTTCTCGATGACTTTCTTGAGTGCAATTTGNACTGTAACATTTGCTTAA
TCACCTT

Sequence 1184

ATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGATAGTCATCTCAGTAAAGGTCTAT
TATCTAAGTTGCCAACTTGTTTACTGAGAGCCCTAAGGAACTAAACNGCCATAATGCC
GTGCACAGNTTGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTCTCCCTCCAGTTTN
CTCAAGCAGGCCTGGCTGAAGGCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAA
TAGCAATAGCAATAAGAAGAATGCCATCCATGGAGCACACCATAATTCTGGAACCACCT
NTCCCGGATCAGGCTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCACTNTACTTT
GCAGAACCTCACCAACTTGCCAGGTTNTCTCCCGGTCTTGAAGAAATGGCTCTCCACC
TGAAAAGTNNGATCTTCTCCATACCAGCTTCTTAAGCAAAAGCAATCCTCTCTTTGCTTC
CTCAAGGGGCA

Sequence 1185

TAGGGCGANTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAA
GGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAA
GATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCT
TGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGA
TGAAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCNTTCAGCATCAAGCTGGAA
TGGGGAATGAANAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAAT
TCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATG

Sequence 1186

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGG

TABLE 1
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CCATCCACCACTTTATAGAGGGTGTAATAAACCAGAAATCAAGGGAGAAAGAAAAAGA
TGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATG
AAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATG
GGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTC
CTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGA
CACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAG
CCCAAGGGAGTTCTGGGAGAGGGACCAGATTGGGGGGTA

Sequence 1187

CCGCGGTGGCGGCCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCAT
ACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGT
TCTGGGAGAGGGACCAGATTGGGG

Sequence 1188

CCGCGGTGGCGGCCGAGGTACAAGATANTCATCTCAGTAAAAGGTCTATTATCTAACTTG
CCAAACTTGTCTTACTGAGAGCCCTAAGGAACTAAACTGCCATAATGCCGTGCACAGCTT
GAAAAGCAATTAGAGTAAGCAAGATTAGTTTTTCTCCCTTTCNAAGTCTCAGCAGGCC
TGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAAATAGCAATAGCAA
TAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACTCTCCCGGATCAG
GCTTCCATTGCTCACGATGCTCACGCTGGGCAGNCGCAACTCTACTTTGCAGAACCTCAC
CAACTTGCCAGGTATTCTCCCCGGT

Sequence 1189

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACCAAATGAAG
TGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAAACCAGAAATCAAGG
GAGGAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAAT
GGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATG
CAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAG
GGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAA
AGAATTGGACTAAAACACTGGCCATACCACTGGACAG

Sequence 1190

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACATGGCGAAGCTAGA
GACTGTAACCTGAAGATTGGGACAAATTAAGAAAAAAATGTGATTAAACACAATTACAA
AACTGTTACGTTAGGGTCAAACAAGAACCATTATGAACTGAATTACAACAAATGAC
ATTATATCTAACTCTTCCGGGTCTCCACAACACTTATACTTACTTAAGCAGCTTAAACAC
TTCCGAGTCTCCACAGCACTCTGATACTTACTTAAACAGCTCTTTAACCTGCCCTAGTA
TTCTTAAGTGCAGCATATCTAATTTTTTTTTCTCAAGTAGTTTGAA

Sequence 1191

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGNCAGGTACCAAATGAACGTGT
GAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAAACCAGAAATCAAGGGAG
AAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
AGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGA
GCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGAT
TGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAA

TABLE 1

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Sequence 1192

CGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGAC
AAGGCCNTCCACCACTTTATAGAGGGTGNAAAAATAAACAGAAATNAAGGGAGAAAAGAA
AAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCANAT
TCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCC
GATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGG
AATGGGGAATGAAGAATAGAGA

Sequence 1193

TGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAAGAAAG
ATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCT
GAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGGAAAAATGCAACAAGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATT
CCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAG
ACACTGGCCATACCACTGGACAG

Sequence 1194

NGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACATAAATCACCTGGAACCTTG
TTAAAAATGCAGATCCTGACTCAGGAGGTCTGAGTTAGAGCCAGGATTNCATATTTCTAG
CCAGCTCCATGATGAGCTGCTGGTCCGCAGATCATGCTTGCNGGTTTTGACCAGAGTCAG
TGTTGGTTANAGTAAGAGGATGAGGCANACATNTGGGAAAAGTCCAGCTGGGGCAAGCAT
TTGAAGTCTGCCTTCTACCANGTCAAAATCAAGGCAACGACCTTCCATAGATAACTATC
AAAGCTTGAGGGGGNGCCTTGAACCCAACCTCTAAATCCCTAAGACCTGCCCACCTCTTG
TGTCTCCTGTNTNAGCAAACATTCCCACACTCTTGCATATTGTTAAAAGTAACCTCTGCT
TACCAGGCTTTTG

Sequence 1195

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGGGGGTGTCGAACAAGGCAGGTTG
GTGGGTTAAGGTCTTAATCTTGACTCGAGATCTCTCTCCGGAGTTCACAGNGTNGGCGAC
GAAGCCGAAGCAGCTGGAGCGCGACCCGGAGGAGTCTGACTTCTCGTTGTCTTCATAATT
TTCATTCTGTTGCTTTCTTCTGTTGACTTGGGCTGGGGGAGGATCCCCGCTGGTCCGCCAG
CAGGCGGGCGGGTAAAGGTAGGCCGCCGAGAGCGAGGTTAGGAGAGGAGAGGAGGCCGCA
GTACCT

Sequence 1196

ATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGAGGAGGCGGAAGCGC
AGCGGGGGCGGGAAGGTTGTAGTGCCGCGAGTTGAGCTCCTCTTGCCTAAGTGGTCCGCG
CCCCTTTAAGAGCAGCGATTGTAAGGAGAGGCGGTCCCGGTGTCCTCGGGTCCCAGGTGA
TTGTGAAGTGCTGACCAATTGCCACTGGACATACTTGAACAAAATAGGAAAATGGCAGC
AAACCCTGTCTCTAAATCAATCAATCAAGCGAGCCAGAATGCAGTAGTGGCCTGAGAGAG
GCATCCTGGAACGCAGTGCGGTCTGGCTAGGCTTAGAAGTATTATGTGATTTTACCTG
ACAAGGG

Sequence 1197

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGA
AGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAA
AGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGG

Sequence 1198

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACGCGGGGAGAGCG
AGCTTCGAGAGAAGCAGTGGTGGGTTCCATGTGGTGGTGGAGTAGGAGGCAGGTCTCCGCG
GTGGTTTCCACAAGAAAAATGGCACAATGTTTCTCAGAAGACAATTACATAAGAATCAGC

TABLE 1
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ATACTTTAAATTACACAGCAAATAATCAGACAATTGATGAAAATACTTACCCAAACACTAA
TTGTAGACTGTGCCTTCTGAATATGTTTTGTCATAAACTTGGAGTAAGGAATCCTCACAG
GCACTGGACAATTCAAAAAACGTAAAGTTTGTGTTAGAATACCTGGGTGCTTTTGGAT
AGAAACCCTCATCCATATCCTGGTAAGGCTTGAAGTTGCACAGGAGTTTTCATTTGTCAA
AACCAGAAAACCATAAGCTTTAGATTTGGG

Sequence 1199

CCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTNTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTTTGA
GAGGGGTTTGGAGTCTGGAACCNATCCTTTCACNTTCAACTTGAAATGGGGAATGAA

Sequence 1200

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAANTGAAGTGTGAAGACAAG
GCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCATAAATCAAGGGAGAANGAAAAG
ATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGANTC
TGAGGCTTTGCATGTCTTGGCATTCTTCAAGAGCTGAATGAAAAATGCAACANGCAGAT
GAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCNTTCAGCATCAAGCTGGAAT
GGGGAATGAAGAATATAGATGTGGTGGCCACTAGGNTNCTGCTGAAAGGGAGNTGAAATT
CCTCCACCAAGTNGGTATTCAAATA

Sequence 1201

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCACGGTACGCGGGGGTAAAC
TGAAAAATCCACAAGACAGAATAGCCAGATCTCAGAGGAGCCTGGCTAAGCAAAACCCTGC
AGAACGGCTGCCTAATTTACAGCAACCATGAGGCCACTTAAGGATGCAGCAAGAAGGAGC
CATCTGCAATCCAGGAAGAAATTCCTTGCCAGGAACCAAATTGGTTGTCACCTTCATCTA
GGACTTCTAGCCTCGAGAACTTACAAATGGTGATGATCAT

Sequence 1202

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCATAAANNAAGGGAGAAAGAA
AAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCANAT
TCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCA
NATGAAGACTTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGG
AATGGGGAATGAAGAATAGAGATGTGGTGGCCACTAGGCTACTGCTGAAAGGGAGCTGAA
ATTCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGTATGGCAAAAAAG

Sequence 1203

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAATATAAAATAATA
CATATGAAGCCACAATATTCAATTACAGTTCAAAGTAGAAATTACTAATCATGTAGCT
GCTTCATTTTTCGTTTTGCATTTTGGCCCTAATTCATTTTACAAGTATACCTGCTGA
GAAAAAGATCCAACTTTTAACTTTGTATGTTTTGTGGAGGGTGCACAATTTCTTCTAA
TATATCTTCAGGTGTTTTAAATTTAATTTGTTTTAATCATAAGATATCATCATGGCCA
AGAGACTGGGAAAATAACAATTTTATTCTTTCTCCTAAGATTGNGATTTTATTATTCAA
GATCTTATGCTTGAATTACTTAGCAAGAAGGCATGATTATGCANAAGACAGGGAAATGAA
GAGAAAAGAGCGGGAATATACGAAAATGAAGCTTCCTTAACAGAGTTCATGGTGGAGATG
GTAGACACTGGTGGAGTTTTTTTCCAGACTTAA

Sequence 1204

TCGAGCGGCCGCCGGGCAGGTACACTCTAAAGAAAGCCATGAGGATGATAATCCACTTT
GATACTTCCAATCTGCTGGTCTTGCTGAACTCTTTGGATCATGGATATCATAAGTTTCGAC
AAAATATTTTTTTGTAGAAGCACAAATGTGAAGNGTCACTCGTTCTGAGACTTCCTCCT
CTGTGAAATCCACAATCTCTTTCTATTTATAGACTTTTCCACAGCAAACATTAGTCTAC
GCAGAGCATTTTGAAAATCATTTGCCAGTCTAAAGTAGTAATAATAAATACTCCAAGAA
CTAAAGTCCCCCTGGTAGCATTCTGGATACCTGGCAGGCATGTTCTGTGGCCCATTC

Sequence 1205

TABLE 1

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NNGNCCTTTTCGAGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCC
ACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAG
ACAACTGTAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTT
TGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAAT

Sequence 1206

AGCGTGGTCGCGGCCGAGGTACATAAAACATTATTCCTTCCTTGGCCTAAAACTCATCG
CCACCTACATTAAAGCTAATATGCCTGATTACTGTTTTAGAGAACTTATTTTATTAGGG
CAGTTCCAAGCTCAAAAATACGCTAACTGGCACCTTGNTAGCTACATAAAATGCACCCT
AGACCCGAACTTACTAGACTCATTATAAAATTTTCTTTAAGGTGTCCACGCAGTCCCTG
GTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTACCCAGTAATCCCCAGAAGGAAC
TTACACTTTTTTTAATCTTTTCTACAACCTTCATATTTTATAATA

Sequence 1207

CCCTTAGCGTGGTCGCGGCCGAGGTACCATCTAGGTCAGTTTAAGAAGAGTCAGCTCAGA
GAAAGCAAGCATAAGGGAAAATGTCACGTAACTAGATCAGGGAACAAAATCCTCTCCTT
GTGGAAATATCCCATGCAGTTTGTGATACAACCTTAGTATCTTATTGCCTAAAAA
TTTCTTATCATTGTTTCAAAAAGCAAAATCATGGAAAATTTTGTGTCCAGGCAAATA
AAAGGTCATTTTAAATTTAGCTGCAATTCAGTGTTCCCTCACTAGGTGGCATTAAATGTC
GCCTGATGTCATTAAGCACCATCCAAAAAGTCTGCTTCATAATCTATTTTCAAGACTTGG
TGATTCTGAAAGTTTTGGTTTTGTGACTTTGTTTCTCAGGAAAAAATATTCTACTTA
AATTTAAGTCTATAATTCAATTTAATATGTGTGTGTCTCATCCAGGATAGGATAGGGT
TGTCTTCTATTTTCCATTTTACCTAT

Sequence 1208

CCCTTTCGAGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCAC
CACTTTATAGAGGGTGTAAAAATAAACAGANATCAAGGGAGAAAGAAAAGATGAAAGAC
AACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCANATTCTGAGGCTTTG
CATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCANATGAAGACTCT
GAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGA
AGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCA
AGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGG

Sequence 1209

AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACCTTTATAGAGGGTGTAAAAATA
AACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGNCAAAATG
CGACTTTNTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAG
CTGAATGAAAAATGCAACAAGCAGATGAAGACTNTGAGAGGGGTTTGGAGTCTGGAAGC
CTCATCCCTTNAGCATCAAGCTGGAATGGGGAANGAAGAATAGAGATGTGGTGCCCACTA
GGCTACTGCTGAAAGGGAGCTGAAATNTCCTTCCACCCAAGTTGGTATTTCAAAATATGT
NATTGACTGGATANGGGCAAAAGGATTTGGACTAAGACACTGGGC

Sequence 1210

GCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAACGGCCATCCACCACCTTTATAG
ACGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAA
AAATTGCCAAATGCGACTTTCTAAAAATGGAGCATAATTCTGAGGCTTTGCATGTCTT
GGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCNGATGAAGACTCTGAGAGGGG
TTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGA
GATGTGNGGCCACTAG

Sequence 1211

CGGAAANTTGGGGGGCCCCCTTNCTTAAGAAAAGGCCATTGGCTTNCCGAAGGCGGGGGC
CCCGCCCCAAGTTGGTTGGAANTGGGGGATTATTNCTTTGGCCAAGAAAANTTTCCGGGG
GGNGTTTNAAGGGNGGGGGGGGGGGGGCCCCCCCCGAGGGGTTAAACCCCCC
TGGGGGNAANAGGGGGGGGAAANNTTNNNAAACCGGNAAAAAACCCCCCAGGGGGGG

TABLE 1
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CCCCCGGGGGGGGAAAAAANCCCCNCGGGGGGAAACCCCCCGG

Sequence 1212

GACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGT
GAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAG
AAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
AGCTGGAATGGGGAATGAAGAATAGAAGATGGTGGTGGCCACTAGGCTACTGCTGAAAGG
GAGCTGAAATTCCTCCCAAGGTTGGGTATTCAAAATATGTAATGACTGGGTATGGCAAA
AGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAATTGCT
GGGTCTTGAGAGAGCCAAAGGAGTTCTGGGAGAGGGACCAGATGGGGGGGTA

Sequence 1213

CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATA
GAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAA
AAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTG
GCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGGCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTAT
TCAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTG
G

Sequence 1214

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGGGCAGGTACCAAATGAAG
TGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGG
GAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGTCAAATGCGACTTTCTAAAAAT
GGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATG
CAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGGCCACTAGGCTACTGCTGAAAG
GGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGTATGGCAAA
GATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAACACCTGAAT

Sequence 1215

TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGA
CAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGA
AAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGC
AGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAGATGTGGTGGCCACTAGGCTACTGCTGAAAGGGAGCTGA
AATTCCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGTATGGCAA

Sequence 1216

CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTG
AAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACCTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAAC
AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAAGATTGTGGTGGCCACTAGGCTACTGCTGAAAGGG
AGCTGAAATTCCTCCCAAGGTTGGTATTCAAATATGTAATGACTGGTATGGCAAAAGA
TTGGAATAAGACACTGGCCATACCACTGNCAGGGTTATGTTAACACCTGAATTGCTGGGT
CTTGAGAGAGCCNAAGGAGTTCTGGGAGAGGGACCAGATGGGGG

Sequence 1217

CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATA
GAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAA
AAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTG

TABLE 1

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GCATTCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCCAAGTTGGTATT
CAAAATATGTAATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCATACCACTGG
CAGGGTTATGTTA

Sequence 1218

CCGCGGTGGCGGCCGAGGTACTTCTTACAGTCTTCAGGAAATTCATTAATCAGTGCCTC
CAGTTCCTTTGGCTTCCAGTTTTGAAGGGTCTTCAGAGGTCTTATTCTCCTTTGGCTGCT
GGCTTGACAGGAATCAGGATGTACTGTTCTGTTGGCCGAGTGGAGACTGGNGTTCTCAA
CCCGGNATGGTGGTCACCTTTGCTCCAGTCAACGTTACAACGGAAGTAAATCTGTGAA
ATGCACCATGAAGCTTTGAGTGAAGCTCTTCCTGGGGACAATGTGGGCTTCAATGTCAAG
AATGTGTCTGTCAAGGATGTTGTCGGGGCAACNTTGCTGGTGACAGCAAAATGACCCA
CCAATGGAAGCAGCTGGCTTCACTGCTCAGGGTGATTATC

Sequence 1219

CCGCGGTGGCGGCCGCGCCGCGGCAGGTACCCTGATGCTACAGACGAGGACATCACCTCACA
CATGGAAGCGAGGAGTTGAATGGTGCATACAAGGCCATCCCCGTTGCCAGGACCTGAA
CGCGCCTTNTGATTGGGACAGCCGTGGGAAGGACAGTTATGAAACGAGTCAGCTGGATGA
CCAGAGTGCTGAAACCCACAGCCACAAGCAGTNCAGATTATATAAGCNGGAAAGCTTATT
GATTANAAGCAATGNGCNTTTCCGATNTGATTGATNNGTNAAGNAACTTTTTNAAANGTN
ANCCCTGAATTNCCNNNACCCAATTAAATTTTNCNANCCCTTTAAAAATTTTNCNTNG
GGNTGGGGCCCCCCCCNAAANTTAGGGNANAAAAATATNAAANCCCCCNAAAAATTTTT
NNNTTNTTTTCTAAAAAAATAAAAAACCCNCCNTTTTTTGGGGGGGGCATTAAAAAGG
GGGAAAAAAATTCGAATTTTTNCCCTTTTNTTTTANCCNAAAAAAAAAAAAAT

Sequence 1220

CCGCGGTGGCGGCCGAGGTACATTGGCACGTCACGATGTCTTGAGTTTCATTCACTAGGT
GGCAGCCTGCATCGTTCCTACTGCAAATGACTGAAATCCCAAACACACAATGAGGCTGGC
TCAGGTTTGACTCTATCTTGGAATAAATAGGAAACTTCATTTATGGAATAGTTTGA
TAACCGTGGATATCACAGGTCCATTGACCTGAGCATTTCCATTTTTGGAACGGGTAGAA
TGTTCCCCAGAGTCAACGAGGCCATGCTGATAATAGTTTCTGGAAGGGATCTCTGGAATT
GGTCTGACCCAATTAACACACGGCCTCTGATGGGAATAGATGTATTTTGGGGACACATTT
TAATCTGATAGCTGTAACCCCTTTTGAGTTGGCTTTTGTTCACTGGAATCCCTTTCCAGT
CA

Sequence 1221

ATAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA
ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAA
TTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATTGGA
AAGACACTGGCCATACC

Sequence 1222

CCGCGGTGGCGGCCGCGCCGCGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTCTCAGGAGCTGAATGAAAAATGCAACAGGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCCAAGG
TTGGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATTGGGACTAAGACAC

Sequence 1223

CGACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGCCGCGGCAGGTACCAA

TABLE 1
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TGAANGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAA
TCAAGGGAGAAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCT
AAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCNTTCCTTCAGGAGCTGAATGAA
AAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCT
TCAGCATCAAGCTGGAATGGGG

Sequence 1224

CCGCGGTGGCGGCCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCA
TGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGA
GAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAG
AATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAG
TTGGTATTCAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATAC
CACTGGACAGGGTTATGTTAACACCTGGAATTGCTGGGTCTTGAGAGAGCCCAANGGAGT
TCTGGGAGAGGGACCAGATTGGGG

Sequence 1225

CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATA
GAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAACTGCAA
AAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTG
GCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAACAGAA
GATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGGTTGGG
TATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGGACTAAAGACACTGGCCATAC
CACTGGACAGGGTTTATGTTAACACCTGAANTGCTGGGGTCTTGAGAGAGCCCAANGAGT
TTNGGAGAGGGCCAGATGGGGGGGTAG

Sequence 1226

AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATA
AACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATG
CGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAG
CTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGC
CTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACT
AGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAAT
GACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTT
AACACCTGAATTGCTGG

Sequence 1227

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTCCAGGAAGTGAAGTAAAA
CCTGGTCTTGGTTGATAGGCCCCAGGTTGGCTTGAGCCATTCCAGGTTGAGAGGCAGGA
GCCACAGTATAATTAGTAGGCTGAGAAGTTTGGGCAGTGAAGTTTGTGCAGGATAATTG
CTCGCCTGGTACTCTTGGAAGTCCACCTCGTTGTCCCTGTTGCTGTCCAAGTTGCTCATC
AGCTTCTGGAAGCAGCTTCACCTGTCCTTTCCCAAGAAGCTGGGCAGCTCCCGGGTC
AGCAGCTCCTTTAGTTCTGACTTGTTGAGCTTGAACCTGTCACCCTCTTGCCCGAGTAC
CTGCCCC

Sequence 1228

ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGA
AGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAA
AGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGAT
TGACTAAGACACTGGCCATACCACTGNCAGGGTTATGTTAACACCTGAATTGCTGGGTCT

TABLE 1
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TTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAAATGGGGGG

Sequence 1229

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAAAATNAACCAGAAATCAAGGGNGA
AAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAAC
AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGTATGGCAAAAGATT
GGACT

Sequence 1230

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGTCTTC
TAGTCCGGTAAACAGAGGGCCTGCCCCGACAGCTTCTGCTTCCGGGTACGCCTTGACA
GCGGCTTTCAACCCCCACCTCAGCCCAGCAATTCGTTTGGAGCATGTGAACACCTTGAGC
CTTGATGAGTTCAGTNTGTGGTATATTATGCAGNGCNTTCAGNGAAAAATNCTTTTNTN
CGGGNNTTNAANNAAAAAANANTNGGGTGCCATGNTNTTNNCCCCNNNNNTNGGGGGGG
GCCCCCTCAAANGGGGGGGGGNACTATNANNNNCCCTNTTTTTTGGGGNNCNAANTNN
ACNCCNTTTNTTNGGGCCCCNTTTTTTGGGGGNAAAAAAACCCCCCTNNGGGGGGG
GTATTTTNTTTTNGAAAAAAAAGGCCCGGGGNGACCCCCCNGGTGGGNTTAN
ANAAAAAAAANTCNCCCNNTTNTTTTTTTTTTAAAA

Sequence 1231

AGGTACGCGGGGCTTTTCCGTGCTACCTGCAGAGGGGTCCATACGGCGTTGTTCTGGATT
CCCGTCGTAACCTAAAGGGAAATTTTACAATGTCCGGAGCCCTTGATGTCCTGCAATG
AAGGAGGAGGATGTCCTTAAGTTCCTTGACAGCAGGAACCCACTTAGGTGGCACCATCTT
GACTTCCAGATGGAACAGTACTCTTGGAAGTCCACCTCGTTGTCCCTGTTGCTGTCCAAG
TTGCTCATCAGCTTCTGGAAGCAGCTTCATCTGTCTTTTCCCAAGAAGCTGGGCAGC
TCCCGGGTCAGCAGCTCCTTTAGTTCTGACTTGTTGAGCTTGAACCTGTACCCTCTTTG
CCCGAGTACCTGCCCC

Sequence 1232

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAAA
CAAAAAGGAACCAAGGCCACTTGATATATAGGTCTCTTCAGCATTTATTGGTGGCAGA
AGAGGAAGATTTCTGAAGAGTGACGCTGCCTGAACCGAGCCCTGCCGAACAGCTGAGAAT
TGCACTGCAACCATGAGTGAGAACAATAAGAATTCCTTGAGAGCAGCCTACGGCAACTA
AAATGCCATTTACAC

Sequence 1233

GCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAANTGAAGTGTGAAGACAAGGCC
ATCCACCACTTTATAGAGGGNGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAGATG
AAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAG
GCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAA
GACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTNATCCCTTCAGCATCAAGCTGGAATGGG
GAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTNCT
CCCCAAGNTTGGTATTCAAATATGTAATGACTGNTATTGGCAAAAA

Sequence 1234

GCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAGAA
AAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGC
AGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGA
AATTCCTNCCCAAGTTNGGTATTCAAATATGTAATTGCTGGTATGGCAAAAGATTGGACT
AAGACACTGGCCCTACCACTGGACAGGGGTATTNTTTAACCCCTGAATTTGCTTGGGT

TABLE 1
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CTTTGAGAGAGCCCCAAGGGGGTTTTGGGAGAGGGGACCCANAATTGGGGGGTAGGTC
Sequence 1235
TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGGCCATCCA
CCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGA
CAAAC TGCAAAAAATTGCCAAATGCCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTT
TGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTTGAAAGG

Sequence 1236
TGGACTCCACCGCGGTGGCGGCCGAGGNACAATACACTAGAAACCAACATAATGTATTTT
TTTTAAACCTGTGNGAAAAATAAATGTTCCACNAGTAGGGATAGGGGAAAAGNAACCA
AAAGAGAGAAAGAGAAAGGAATGCTGGTTNATCTTTGTANGTNGTAATCGAATGGAGAAA
TTTGCAGTATTTTANCCACTATTAGNGAAATTTTTTTTTTTTTGTCAAAATGANAGACT
GGAACCTCTGTTCAANATGCTTTNATTGNACTCTGGTTTTGAAGACCGGGNNNGGNA
GCAANNAAAAACGTNGGGAAACCTNNGATGGACNTAAAGGGGCNNTGGNNGCCAAAGGG
ACCTTGGGGGAAAANGGTCCACTTTGAATANANAAGCATGGGGNGGGGNGNATTTTTCCC
CCCCCTTTTAAAAANATGGTNTGGAATAATTTTAAANNNGGNATATTA AAAACCACTTT
NTT

Sequence 1237
GGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTGTGATATCCACATAT
TTTCGATAAAAAATCCAAAGCCAGGCGAATGTGGATTGGAATAAAGACATAGGCAGTGTA
TACCACCATAGCAATAATGGTTAGTAAGATGGTGTTAAACATAGATCGCTCCCAGGGCTC
TAAACAGCACAGCAGCTAATGATTTGGTATTGATAGTAGAGCCAGGAGAAATATTCCTT
CACACGCCTCAAATCCATGGTTGGCTCCTTCAAGCTGCAGTAAGTTTGTCTAAGAAAGT
CCAGGTCTGGTTCTTCAGCCTTGCTCCTTCGCGAAATGATCCTGTGTGGGTAGTTCTCC
TCTCTGGGTTGCTGTTTCTCATCTCCAGTTGGGTGTATCTCCCTGCGGCTTAGGTGAG
CGCCGAGGCTTTGGC

Sequence 1238
AGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGA
AGACNNTGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAG
CAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAAC
AAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAA
GCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGGTATTCAAATATGTAATGACTGGTATGGCAAAAGAT
T

Sequence 1239
AGCTCCACCGCGGTGGCGGCCGAGGTACGCGGGGGGCAGAAGAGGAAGATTTTTGAAGAG
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GAACAATAAGAAATTCCTTGGAGAGCAGCCTACGGGNAACTAAAATGCCATTTACCTGGA
ACTTGATGGANGGGAGAAAACCTCTTGAATGATTTTGAAGACAAAAGTTATTTTTACC
CGGCACTGAAGATTTNCAGCAATCCGTTGGAATNTCAAAGGCCACCAANGGTGCCAA
CNCCTACATGNGCNCCTATCNTAAANAGGCACCCCTCCAANAGGGGGNCNAATAAACGNA
GGGNCNAAGNNNCCCTGGGNAATTTGGCCTTTACNGGNTAAAAAGGCCTTGGANNGGAG
GTTTTAAANTNCCTACGGCCAAAGGNAAGCCATTGGCNTGNACCCCAAGGGCCAAGGAAA
AATCCANNTAAAAAGNTTCTTGGGNGTCCACCCCTNTGGG

Sequence 1240
AGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGG
CCATCCACCACTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGA
TGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTG
AGGCTTTGCATGTCTTGGCATTCTTTTCAGGGAGCCTGAATTGAAAAAA

TABLE 1

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Sequence 1241

AGCTCCCCGCGGTGGCGGCCGCCCGGGCNGGTACGCGGGGGAGACATTCTCAATTGCTT
AGACATATTCTGAGCCTACAGCAGAGGAACCTCCAGTCTCAGCACCATGAATCAAACCTGC
CATTCTGATTTGCTGCCTTATCTTTCTGACTCTAAGTGGCATTCAAGGAGTACGGGAAGG
CGAAGAAAAGAATAGAGAAGATAGGGAATTAGAAGATAAAAACATACTTTTAGAAGAAA
AAAGATAAATTTAAACCTGAAAAGTAGGAAGCAGAAGAAAAAGACAAGCTAGGAAACAA
AAAAGCTTAAGGGGCAAAAATTGTACCTTCGGCCCCGCTCTAGAACTAGTGGGATCCCCCG
GGCTGCAG

Sequence 1242

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTG
AAGACATGGCCATCCACCCTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGA
AAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAAC
CAAG

Sequence 1243

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCCTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGC
AACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCAT
CAAGCTGGAATGGGAATGAAGAATAGAGATGTGGTGCCCACTANGCTACTGCTGAAAGG

Sequence 1244

CCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCCTTTATA
GAGGGTGTAAAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAA
AAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTG
GCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTAT
TCAAAATATGTAATGACTGGTATGGCAAAA

Sequence 1245

TGGTACTGCTAAAGTCATGACAGCCCAACAGGTGATGTTTTACTGGATGAAACTCTGAAA
CACATCAAAGCAACTGAACCCACAGAACTGTCCAAACATGGATAGAGCTACTCACTGGT
GAGACCTGGAACCCCTTCAAATTACAGTACTGTTCTGTTGGCCGAGTGGAGACTGGTGT
TCTCAAACCCGGTATGGNGGTCACCTTTGCTCCAGTCAACGTTACAACGGAAGTAAATC
TGTCGAAATGCACCATGAAGCTTTGAGTGAAGCTCTTCTGGGGACAATGTGGGCTTCAA
TGACAAGAATGTGTCTGTCAAGGATGTTCCGTCTGGCAACCGTTNCTGGTGACAGCAAA
AATGACCCCAACAA

Sequence 1246

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCCTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTG

Sequence 1247

AGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGTGTGA
AGACAAGGCCATCCACCCTTTATAGAGGGTGTAAAAATAAACAGAAATCAAGGGAGAA
AGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGC
AGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACA
AGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATAGNAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG
CTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT

TABLE 1
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GGACTAAGACACTGGCCATACCACTGGACAGGGTTTATTGTTAACACCTGAATTGCTGGG
GTC

Sequence 1248

GAGCTCCCCGCGGTGGCGGCCGNGGTACATAAAACATTATTCCTTCCTTGGGCTAAAAAC
TTTTTGCCACCTACATTAAAGCTAATATGCCTGNTTACTGTTTTAGAGAACTTATTTTA
TTAGGGCAGTTCCAAGCTCAAAAATACGCTAACTGGCACCTTGTTAGCTACATAAAAATG
CACCTTAGACCCGAAACTTACTAGACTCATTATAAAATTTTNTTTAAGGTGTCCACGCAG
NCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATNAGCCCTACCCAGTAATCCCCAGA
AGGAACTTACACTTTTTTTTAACTTTTCCTACAACCTNCATATTTTATAAATAAAAAAGAC
ANAAATGTCAGGCCTGTGAGCTGAAGCTTAGCCAT

Sequence 1249

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGTG
GAAGCTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGAGGGAGA
TACACCCAACTGGGAGATGAGGAAACAGCAACCAGAGAGGAGAACTAACCACACAGGA
TCATTTCTGTAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAACTTAC
TGCAGCTTGAAGGAGCCAAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTC
TACTATCAATACCAATCATTAGCTGCTGTGCTGTTTTAGAGCCCTGGGAGCCGATCTAT
GTTTAACGCCATCTTACTAACCATTATTGCTATGGTGGTATACACTGCCTATGTNTTAT
TCCAATCCACATTCGCCTGGCTTGGGAATTTT

Sequence 1250

GGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAAGGC
CATCCACCACCTTTATAGAGGGTGTA AAAATAAACAGAAATCAAGGGAGAAAGAAAGAT
GAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCC
TCCACCAAGTTGGTATTCAAAATNTGAATGACTGGTATTGGCAAAA

Sequence 1251

CTNCTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAA
GACAAGGCCATCCACCACCTTTATAGAGGGTGTA AAAATAAACAGAAATCAAGGGAGAAA
GAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCA
GATTTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAAATGCAACAA
GCAGATGAAGACTCTGAGAGGGGTTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAG
CTGGAATGGGGAATGAAGAATGGAAGAATNGTGGTGCCCACTAGGCTACTGCTGAAAGGG
GAGCTTGAAATTCCTCCACCAAGGTTTGGTATTC

Sequence 1252

TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAATCTTGAGAAGGATTT
GAAGGACAAGTTTGTGGCCCTGACCATAGATGATATCTGCTTCTCGCTCAACGACAACCTC
ACCAAACATCAGATATTCTGAGAACGCCGTGAGGATTGAGCCAACTCCGTGAGTCTGGA
AGACTGGTTGGACTTCTCCAGCACCAATGTGGAGAAGGCTGACAAGCAGCGGAACAACTC
CCTGATGCTGAAAGCCCTGGTGGATCGAATCCTGTCCAGACAGCCAATGGATCTGTGCA
AGCCAGTGTGATTGTGGTGGACACCGGCATTCAGAAATGGGCCTGAAGGGATCAAAGGGA
TGCCAGGGACAAGCTGGGCTTGATCATCTGGCCCAAGGTATTNGGAAAGAGATTGCTTCC
CAGGGAAGAAAA

Sequence 1253

ACTNAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGAC
AAGGCCATCCACCACCTTTATAGAGGGTGTA AAAATAAACAGAAATCAAGGGAGAAAGAA
AAGATGAAAGACAACTGCAAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGA
TTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAAATGCAACAAGC
AGATGAAGACTCTGAGAGGGGTTTNGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCT
GGAATGGGGAATGAAGAANGNAGATTGGTGGTGCCCACTAGGCTACTGCTGAAAGGGAG

TABLE 1
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CTGAAATTCCTCCCCCAAGGTTGGTATTCAAAAATATTGTAATGAACTGGGTATTGGCAA

Sequence 1254

CCGCGGTGGCGGCCGNGGTACAATGATTGTCATCTCAGTAAAAGGTCTATTATCTAACTT
GCCAAACTTGTTTACTGAGAGCCCTAAGGAACTAAAAGTCCATAATGCCGTGCACAGCT
TGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTCTCCCTTCCAGTTCTCAGCAGGCC
TGGCTGAAGGCCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAA
TAAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACTCTCCCGGATCAG
GCTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCAC
CAACTGCCCAGGTATTCTCCCCGGTCTTGA

Sequence 1255

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCATGGTACGCGGGGG
GGTGGAGAGAGGCCTCTAGACTTCAGTTTCAGTTTCCTGGCTCTGGGCAGCAGCAAGAAT
TCCTCTGCCTCCCATCCTACCATTCACTGTCTTGCCGGCAGCCAGCTGAGAGCAATGGGA
AATGGGGAGTCCCAGCTGTCTCGGTGCTGCTCANAAGCTGGGTTGTTTATCCAGGAA
TACCTGAAGCCCTACGAAGAATGTCAGACACTGATCGACGAGATGGTGAACACCATCTGG
GACGTCTGCAGGAACCCGAACAGTTCCCCCTGGNGCANGGAGTGCCATAGGNGGCTCC
TATGGACGGAAAAC

Sequence 1256

TGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACAANGGCCATCCA
CCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGA
CAAAGTCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTT
TGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACT
CTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAAT
GAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCT

Sequence 1257

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGACA
AGGCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGGAGAAAGAAA
AGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGAT
TCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCA
GATGAAGACTCTGAGAGGGGTTTGGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTG
GAATGGGGAATGAAGAATAGAAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTG
AAA

Sequence 1258

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAATAATAAACAGAAATCAAGGG
AGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGC
AACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGAAGATTGTGGTGCCCACTAGGCTACTGCTGAA
AGGGAGCCTGAAATTCCTCCCCAAGGTTGGGTATTCAAAAATATGTAATGACTTGGTATG
GCAAAAAGATTGGGACTAAAG

Sequence 1259

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTCTTTGTTT
TGGCACACTTTTCTGACAAACAGCCAGTGTCTCAATACATAAATACTAGTCCACGTTA
ACAACAATAGCATATGAGACCGCTCTCCGTAAAGATGCCAGATTGGATGCAAATGGACTG
GAAATACCTTGGAGGGTTTCAAAAAATAAGACAAAGGGCAAAGGAACCTTTGCCAAAGGA
GATGGAGAGCAATTCTTTAAAGATAGTGGGAGGGAGGAAGCAAAGAGCTCATAAATACAA
GCCTCTTAAATGGGACGCATTTGCCTCGCGCCTCTGGGGTGTCTGCAGCTCAGCNTTGG
TGCCCCACACGGGACACCCGACTTTT

Sequence 1260

TABLE 1
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TAGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTTCAATGTCATT
AACCATAAATGAGCATTTACAATCTGGATTAAATGTCACATGGTATTAAGTCTACACTTA
GAGTAATGCTTTTACTGATTTTTAAAAATATATGCATATGTTTAGTGATCGAGAAAAGTG
AAATACTGGAGTACTTTTTTTTTTTTTTTTTTTGGCTTGATGAGTAGGTGAGTTTATT
GGGACTTACACACAGGTCAATCCTGGGCGGCGACAAGACAGCTCTAGAGATCTGAGCTTC
CTCCCAATGCTAAACTGCTTTCATGCTAATTTTCTGACTGTTTACTTACCCGGGGTAAGA
GCGATGGGGACTGTTTTCAATTGG

Sequence 1261

TNCTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCAAATGAAGT
GTGAAGACAAGGCCATCCACCCTTTATAGAGGGTGTAATAAACCAGAAATCAAGGG
AGAAAGAAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATG
GAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCCTCAGGAGCTGAATGAAAAATGC
ACAAGCAGATGAAGACTCTGAGAGGGGTTTTGGAGTCTGGAAGCCTCATCCCTTCAGCA
TCAAGCTGGAATGGGGAATGAAGAATAGGAGATGTGGTGCCCACTAGGCTACTGCTGAAA
GGGAGCTGAAATTCCTCCACCAAGGTTGGGTATTCAAAATATGTAATGACTGGTATGGCA
AAAGATTGGG

Sequence 1262

TGGCGGCCGCCCGGCAGGTACGCGGNGCAGAAGAGGAAGATTTCTGAAGAGTGCAGCTGCC
TGAACCGAGCCCTGCCGAACAGCTGAGAATTGCACTGCAACCATGAGNGAGAACAATAAG
AATTCCTTGAGAGCAGCTACGGCACTAAAATGCTTTCACCTGGAAGCTTGATGGGAGGG
AGAAAACCTCCTTGATGATTTTGAAGACAAAGTATTTTACCGGACTGAGTTTCAGAATCG
TGAATTCAAAGCCACAATGTGCAACCTACTGCCTATCTAAAGCACCTCAAAGGGCAAAC
GAGGCAGCCCTGGAATGCTTACGTAAAGCTGAAGAGTTAATCCAGCANGAGCATGCTGAC
AAGGCAGAAATCAAAGTCTGGTCACCTGGGAAA

Sequence 1263

CGAGGTACCCAGGCCTGCAAATCTCCTGGCAGGATGGTCAGGAAGTCTCTAGCACCAGC
AGTTCAGAATCTGTTCCCTTGGTATGGATCTCTGGCTTCAGCCACTGACAGCAGAGCTCC
CGGAGGCGGCTCAGTGCCTCGCGAGGTCAGGAGAATCCTGGTAGCAGAACTGCCTAAAA
AGCTGCCTGCAGAGCTCCTGCTTAAGGAGTTCACTTCTCTGTAAGCAAGTGCTCTGCCA
TGGATAAATTCCTCCTCTTCTATCTTCACTATCAGAAGTCCTTCATCCTCTGGAGAGTTC
TGGGCTGCAGCTTTCTTTGGTTCTGTAGCCATCTCTCGGACAGGGCTGATTCCGATCGGA
CACTTCCGGTGGAAGGACTGAGCGGCGCTACACTTCAAGAATTCGTCCACAGGGACTTG
TGAGTCTGCGCAGAAGGCGGGATGCCTTTGGAAGTACGATTCCAAGAATCCTTCTGGGTC
TCTTCGGGCGCAGACTTTTCGCCAAAGTCTGAAGATCTCAGGGCTTGAAGGAGGGGGCA
TCCTTCTTCTTATTGNAGTAGTGTGTCTTGCTAAATAACAGAAGGGACTCCTGAAAAGA
AAATGACGTTGGCCCGGGCGCGGGGGCTTACGCCTGCAAGTCCACACTTTGGGAGGCCGA
ACNGGCNGATCACGAAGGTCAGGAGATCGANGACTATCTGGGTTACGCGGNGACACCCTG
NGTTTCTTAAATCCANAAAAAAAAAAAAAAAAAAAA

Sequence 1264

GGCGAATTGGACTCCACGCGGTGGCGGCCCGAGGTACAGAGATTTATAATGTGCTGCTC
TAGGTCCTATCGGGTAAAGGGATCAGCAGATGTGAAGTCAAGAGTCTCCTGTAAGATTTG
ACTTCTTGGAACATATTTAATCCTGGGCCTCCTNTTCAAATCACCTATTTCTTTA
GTTTTTGCAGTGATACTGTGTGTTGCTTCTAACAGAGGTTCAAGTTTACAGCCTTTCCC
TCAAGTGTCTTATCCTAAAAGTAAACCTAGATGATCTAAGGTGGTGGNTTTCAACAGGG
TGCAAAATTTGCCTCCTATACTCGCAACACCCAGNGACAGTTGGCTATGTCTNNGAGACAT
TTTTGNGTTNTCACACCTGGANNNAGGGTGGGGGAGGTGGNGCTAATGACANCAAGNTGG
CCNTAANCCAATNATGCTGATANAAATNCTACANTGCACAAGGATAGGNTCCACANAAC
ANAAGNCTTANCCAAACCCCAAATACTAACAAT

Sequence 1265

CCGCGGTGGCGGCCCGAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTT
GCCAACTTGTTTACTGAGAGCCCTAAGGAACTAAAAGTCCATAATGCCGTGCACAGCT

TABLE 1
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TGAAAAGCAATTAGAGTAAGCAAGATTAGTTTTCTCCTTCCAGTTCCTCAGCAGGCCT
GGCTGAAGGCCAGGAGGGAAGGAAATATAAGAACCAACAATAAAATAGCAATAGCAAT
AAGAAGAATGCCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAGG
CTTCCATTGCTCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCACC
AACTTGCCAGGTATTCTCCCGGTCTTGAAGAAATGGCTCTCCACCTGAAAAGTTGATC
TTCTCCATACCAGCTTCTTAAGCAAAAGCAATCCTCTCTTTGCTTCTCAAGGGGCAGC
ACAAAGGATGTTTTGGCTGTGTGGAACAGAAGCCGCATTTGTAGTTGCACTGGCGAGT
GAAGTGATAGTTGACGCTGGTTGGGGTGGT

Sequence 1266

CCGCGGTGGCGGCCCGCCGGGCAAGGTACTTGCTAACTTTGACGCCAGCATCTCTGAAAG
ATCCCATCGAAGGCCGGTCATTGCAAATACAGGCTGTTCTTTTACCCTTGATCTGCA
AGACATCAAGTGGAAGTGTCTCTCTTTCACAATGGCAAGTGTGGCATCAGTAATATGTT
GGACTTTGTTTCCACTTTCGGCAAAGAGGGTATGACTCAAACCTACTGGTCTCTCCAGTG
GGATAATCCAATGGGAATCTTACTGAAGGTAGCCTCATCTGTTCTGTCGAAGAACACCAA
GTAACAACCTNCTGCAGTGTCCCATCTCCTTCTGNAACAATGGATCACATTCGGNGTT
TTCCATCAGTTNCAAGGAGGTTTNTTNGGCTTGGGCCCTTAANAAATCTGNGCTTAAACA
AAAAGGCCNATTCTTCCCAAATAAAAANGGAAAAANTCGGGGGCCNCAATTTTTTTT

Sequence 1267

CACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGT
GAAGACAAGGCCATCCACCACCTTATAGAGGGTGTAATAAACCAGAAATCAAGGGAG
AAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGA
GCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTTCAGGAGCTGAATGAAAAATGCAA
CAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCA
AGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGA
GCTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAATGACTGGGTATGGCAAAAGA
TTGGACTAAGACACTGGCCATACCACTGGACAGG

Sequence 1268

GGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACCTTATAGAGGGTGTAATAA
ACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATGC
GACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGC
TGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCC
TCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAG
GCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAATGA
CTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAA
CACCTGAATT

Sequence 1269

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTACTTCTACAG
AGATCCTGAAGAGATTGAAAAAGAAGAGCAGGCTGCTGCTGAGAAGGCAGTGACCAAGGA
GGAATTTAGGGTGAATGGACTGCTCCCGCTCCTGAGTTCACTGCTACTCAGCCTGAGGT
TGCAGACTGGTCTGAAGGTGTACTCTTGGTTTATCAATGGGACGTTCCAGCAATCCACAC
AAGAGCTCTTTATCCCCAACATCACTGTGAATAATAGCGGATCCTATATGTCCAAGCCC
ATAACTCAGCCACTGGCCTCAATAGGACCACAGTCACGATGATCACAGTCTCTGGAAGTG
CTCCTGTCTCTCAAGCTGTGGCCACCGTCGGCATCACGATTG

Sequence 1270

AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACCTTATAGAGGGTGTAATAA
AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAATG
CGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAG
CTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGC
CTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGGAGATGTGGTGCCCACT
AGGCTACTGTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAAT
GACTGGTATGGCAAAAGA

TABLE 1
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Sequence 1271

ACACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCTCAT
TTTTATTTTAAAAACCATTCAGCACATTTATCTTATGTAACATGCAGAGCATATATCTAT
CTGTATTTTAAAAATTTTCTGTACTCATTGATACATAGTACTTCCTTGATGTTGTTGG
AGTCCGTGAGAAACATGGCGACTCGATCAATGCCCATGCCCCAGCCAGCTGTGGGGGGCA
GCCCATATTCAGGGCAGTACTCAAAGGTGATATTTGCTTTTTTCAATGCTTCAGGGGAA
AAATCCTTTTCTTTA

Sequence 1272

TAAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAANGACA
AGGCCATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAA
AGATGAAAGACAACTGCAAAAAATTGCCAAATGCGACTTTCTAAAAATGGAGCAGATT
CTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAG
ATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGA
ATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAA
TTCCTCCACCAAGTTGGTATTCAAAATATGTAATGACTGGGTATGGCAAAAGATT

Sequence 1273

AATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCGTGGTGACGTGGTTCCTCAAAGATGTC
AATGCTGCCATTGCCACCATCAAAACCAAGCGCAGCATCCAGTTTGTGGATTGGTGCCCC
ACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCCACTGTGGTGCCTGGTGGAGACCTG
GCCAAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTAAA
AATAAACAGAAATCAAGGGAGAAAAGAAAGATGAAAGACAACTGCAAAAAATTGCCAA
AATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCA
GGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGG
AAGCCTCATCCCTTCAGCATCAAGCTGGAAT

Sequence 1274

ATCCCCGGCGNGGCNNNNCGCCCGTTGAGTACTCTTTGTTTTGGCACACTTTTCTGAC
AAACAGCCAGTGTTCTCAACACATAAATACTAGTCCACGTTAACAACAATAGCATATGAG
ACCGCTCTCCGTAAAGATGCCAGATTGGATGCAAATGGACTGGAAATACCTTGGAGGGTT
TCACAAAAATAAGACAAAGGGCAAAGGAACCTTTGCCAAAGGAGATGGAGAGCAATTCTTT
AAAGTTAGTGGGAGGGAGGAAGCAAAGAGCTCATAAATACAAGCCTCTTAAATGGGACG
CATTTGCCTCGCGCCTACTGGGTGTCTGCAGCTCAGCTTGGTGCCCCACACAGGACACCG
ACTTTAAGTGGCTGCCTTTGCAAGGCTGAGAGGCCATGGAGGGGTTGATGCCTGAAGTGT
CAGCGCCATCTAGTGAAACATGGGGCATGGCCC

Sequence 1275

GGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCC
ATCCACCACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATG
AAAGACAACTGCAAAAAATTNCCAAATGCCGACTTTCTAAAAATGGAGCAGATTCTGA
GGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGA
AGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGG
GGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTNC
TCCACCAAGTTGGTATTCAAAATATGTAATGACTGGTATGGCAA

Sequence 1276

AGGTACAAAATTATCATCATTTAGAGTTGATTTTTTACCAGCCCTGAATTTTCAAAT
TGTAATATGCTGTTTCAATCTTTTTATTAAATTACTTAATGATTCCAGTCTGCAAAAT
GAGCCATAAGACTTTGCTNCTGTTTGNATANGATNCAATNTGGANATTGGGGGNGGGNAA
ACCATANGTAAGGTTAAACCTATCCGTCACCTGCTTCATGTAAAAAGACTCCACCATTTGN
TTGGATNTATTTTTTCTCCAGGCNACTAGTAAGAAAAAGGTGAACAAAGGTGGATTN
CATCCCTNNCAAANTGGGCCCTTNTGGCNCAATTCTTTTTTCANTAATCCTATGGTANAC
CNNTTTTGGTAGATTACCTTGGTGGTNGAATTTTNGCNGTNTTGGNGGCNTAATTNNNA
AAAAATTCTTTGGGGATTTAAATTTAAANCAAAAAAACCAACCAAATAAANTTCTAA
TCCACCCNTGNGGAAATTTATTTTGAAAAAGGAAAAATTTTCAGGTTAAAAAACAAAGG

TABLE 1
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ANTGGNTGGTTCCTTCCATTAGGTTTAAAGGGGAGGAGGNANNATTAAAAAAATTAAAA
AAATTGGTTCATTTTAAAACAAGGTTTNGAAATTTNAAGGGAA

Sequence 1277

AGGTACAAAATTATCATCATTTAGAGTTGATTTTTTACCAGCCCTGAATTTTCAAAC
TGTAATATGCTGTTTACAATCTTTTATTAAATTACTTAATGATTCCAGTNTGGCAAAT
GAGCCATAGACTTTTGCTCTGCTTGTATAAGATCANTTGAATTGGGNGGGGGGGANAA
CCANTAGTTAAGNCTAAATCTAATCCGGTCACCTGGCTTCATTGTAAAAGAACCCACAA
TTGGTCTGAATTAATTTTTTGGCCAGGCACCANGAAAGNAANATNGNTGTACCAAAGNTN
GAANTACATTCTTGGCAAANTGGGGCCCTCTTTGGCCCAAATCCTTTTTTCCAATTATC
CTTATTGGTTAAAACCCCTTTTTTGGTTAAGTNTNACCTTGGGTGGTTGGAATNTTTAAA
GCCGNCCTTGGNNGGCCCTAATTTTGGTAAAAAATTTCTTTGGGGGATTTTAAATTTA
AACCCAANAANAACCANACCAANAATAANTTCNTNATTNCACCCCTTGGGGNAAATTNA
TTTTGGGAAAAAGGAAAAANATTTTCNAAGTTTAAAAAACCCAAAGGAANTGGGTNGTTCC
TCCAATTANGGTNTTAAAAGGG

Sequence 1278

AGGTACATTTACACAATATTAACACTAAAAATCTGTGTTTTTTTAAAACACCATAGAAGT
CAAACCACAAAAACCCAGGATCTTGTTTTAAATGTGTTTATGAAGACTGCTGCTGAGCTC
AAAAGCATTGCAGGTAATCATGACCACCTAGATGAAAGCTGGATGTTTGAAAACCTCTTC
ATGTCCAATGAATGTAAATTTTTTACCTCATCCCCAAGGTATTCTCCATACTTTGTTT
TACTTTTGACCTTCTTTTTTTTTTGGGNCACCTCTTTTCATGGCATAAGGGCCTNGACT
TGAGGGGGTACAGGTTCTTTTTNGTGGTNTAAAAGGAATTACTTTTCATTAATGAACCTC
CTCCTTGGTTTCTTTAATTTCCCTTTAAATTTTCTTCAATAATTGGTAAATNATTTT
TTTTTCNTTTTTAAGNGGACC

Sequence 1279

NCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATGAAGTGTGAAGA
CAACGGCCATCCACCACTTTATAGAGGGTGTAATAAATAAACAGAAATCAAGGGAGAAAAG
AAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAG
ATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGCTGAATGAAAAATGCAACAAG
CAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCT
GGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTG
AAATTCCTCCACCAAGGTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATT

Sequence 1280

GTGGCGGCCGAGGTACCAANTGAAGTGTGAATGACAATGGCCATCCANTANTTTATAGAG
GGTGTAATAAATAAACAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAA
ATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTTGCATGTCTTGGC
ATTCCTTCAGGAGCTGA

Sequence 1281

CCGCGGTGGCGGCCGCTCGGGCAGGTACCATTCCTCTACATCCATTTGGTAGCAGAACCT
CAAGTGTAAGCAGTCAGTGTAGCATGAATATGAACTGGCTCAGTTTATCACTTCCTGTTT
NGACCTGAAGCACCAACCCAGCTATGCAGAAGTGGTAACAGAGGAACAAAGGCGGAACAAT
CTTGACCAAGTGAGTGCTTGTGATGACTTTGAGAGAGCCCTTCAAGGACCACTGTTTGCA
TATATCCAGGAGTTTCGATTCTTGCTCCACCTCTTTATTTCAGAGATTGATCCAAATCCT
GATCAGTCAGCAGATGATAGACCATCCTGCCCTTTTGTGAAGGAACACTTGGTTGA

Sequence 1282

GAGTCCCCGCGGTGGCGGCCGCCCCGGGCAGGTACATAAAACATTATTCCTTCCTTGGCC
TAAAACTCATCGCCACCTACATTAAAGCTAATATGCCTGATTACTGTTTTAGAGAACT
TATTTTATTAGGGCAGTTCCAAGCTCAAAAATACGCTAACTGGCACCTTGTTAGCTACAT
AAAAATGCACCCTAGACCCGAACTTACTAGACTCATTATAAAATTTTCTTTAAGGTGTC
CACGCAGTCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTACCCAGTAAT
CCCCAGAAGGAACCTTACACTTTTTTTAATCTTTTCTACAACCTTCATATTTTATAAATA
AAAAGACAAAAATGTCAGGCCTGTG

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Sequence 1283

GGTGGCGGCGCCCGNCAGGTACCAAATGAAGTGTGAAGACCNGGCCATCCACCACTTTAT
AGAGGGTGTAAAAATAAACCAGAAATCATGGGAGAAAAGAAAAGATNAAAGACAACTGCA
AAAAATTGCCAAAATGCGACTTTCTAAAAATGAGCAGATTCTGAGGCTTTGCATGTCTTG
GCATTCCTTCAGGAGCTGAATGAAAAATGCAACANGCAGATGAAGACTCTGAGAGGGGT
TTGGAGTCTGGAAGCCTCATCCCTTCANCATCAANCTGGAATGGGGAATGAAGAATAGAG
ATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTAT
TCAAAATATGNAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTG
GACAGGNTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCNAGGAGTTCTGGGA
NAGGNACCACATTGGGG

Sequence 1284

CGCGGTGGCGGCGCCCGGGCAGGTACCCCGGGAGAGCCCGCTTCCCCCTCCTCCCTGTG
CTGTCTGCACCCGAGGAGAGCGGCCTGCCGGAAGTGGGCCACCATATCTGGAACTACA
GTCTATGCTTTGAAGCGCAAAAGGGAATAAACATTAAAGACTCCCCGGGGACCTGGAGG
ATGGACTTTTCATGGTGGCCGGAGCAGCAGCTTACAATGAAAAATCAGAGACTGGTGCT
CTTGAGAAAACTATAGTTGGCAAATTCCTTAACCACAATGACTTCAAAATTTTAAAA
AATAATGAGCGTCAGCTGTGTGAAGTCCTCCAGAATAAGTTTGGCTGTATCTCTACCCTG
GTCTCTCCAGTTCAAGGAAGGCAACAAGCAAATCTCTGCAAGTGTTCAAAAAATGCTGAC
TCCTAGGATAGAGTTATCAAGTCTGAAAGATGACCTCACCACACATGCTGTTGATGCTG
TGGTGAATGCACCAATGAAGATCTTCTGCATGGGGGAGGCCTGGCCCTGGCCCTGG

Sequence 1285

CGCCGGGCAGGTACCAAATGAAGTGTGAAGACANGGCCATCCACCACTTTATAGAGGGTG
TAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGA'GAAAGACAACTGCAAAAAATTG
CCAAAATGCGACTTTCTAAAAATGNGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCTT
TCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTG
CCCCTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATA
TGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGG

Sequence 1286

TCCGGCGAATTGGAGCTCCCCGCGGTGGCGGCGCCCGCCCGGGCAGGTACAGGTAAGATATA
CTGGAGTCACAGAGCAATATGCATTAACAGGATACAACAGTTCATAAAAACTGAGTAACT
ATGCACACAAATTTCTTAAACAGCCACCTAAAGAGAAAATGCACAGATGTATGGTGGAAA
CTGTATCTAACACTGAACTACTACAGGACTCCATCAATGAGTCCAACCTTTTAGTGATAA
AAACTACTGTACACTACATGAAGAACCATATGTTTATAATTATCCAAATAAAAAATGAAG
TTATTAACCTTCAAGATAATATGGTAATTTGCATTGAACCGATGATTTTACAAAATCTG
CAAAGGTCAAAATTTTAAAAGATGGCTGAACAGTAATTGCAGCATCTAATAAAAACGCAG
CTCATTACCGAGCAAACGGTTTTAATTAATAAATTCAAAAGGAATAATCCTGACAGGAGAA
ATAAAAAAATAGATGTCAAAAGAAGATAAAATTTTCAAAGGAGTAGTAACCTCAAGTT
TTAACACC

Sequence 1287

CCGCGGTGGCGGCGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCA
CTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAA
ACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGNGCAGATTCTGAGGCTTTGCAT
GTCTTGGCATTCCTTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAG
AGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGA
ATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGT
TGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATA
CCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTT
CTGGGAGAGGGACAGATTGGGGGGTAGGT

Sequence 1288

CCGGGCAGGTACAAGATAGTCATCTCAGTAAAAGGTCTATTATCTAACTTGCCAACTTG

TABLE 1
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TTCAGTGAAGAGCCCTAAGGAACTAAAAGTCCATAATGCCGTGCACAGCTTGAAAAGCAA
TTAGAGTAAGCAAGATAGTTTTCTCCCTTCCAGTTCCTCAGCAGGCCTGGCTGAAGGC
CCAGGAGGGAAGGAAATATAAGAACCAACAATAAAAATAGCAATAGCAATAAGAAGAATG
CCATCCCATGGAGCACACCATAATTCTGGAACCACCTCTCCCGGATCAGGCTTCCATTGC
TCACGATGCTCACGCTGGGCAGCCGCAACTCTACTTTGCAGAACCTCACCAACTTGTCCTA
GGTATTCTCCCCGGTCTTGAAGAAATGGCTCTCCACCTGAAAAGTTGATCTTTCTCCATA
CCAGCTTCCTTAAAGCAAAAGCAATCCTCTCTTTGCTTNCCTCAAGGGGCAAGCACAAAGG
GATGTTTTTGGCTGTGTGGAAACAGAAAGCCCGCATTGTAGTTTGCAGTGGCCAGTGAA
GTGATAGTTGACCCTGGTTGGGGTGGGGG

Sequence 1289

CCGGGCAGGTACCAAAATTGTAAGAAGAAGCTTGGGAAGCTGCCACCTCAGTATGCCCTG
GAGCTCCTGACGGTCTATGCTTGGGAGCGAGGGAGCATGAAAACACATTTCAACACAGCC
CAGGGATTTTCGGACGGCTTGGAAATTAGTCATAAACTACCAGCAACTCTGCATCTACTGGA
CAAAGTATTATGACTTTAAAAACCCCATTTTAAAAAGTACACAGGAGGCAAAGTGTTTC
ACATCATAGACTTCACCTCCAACCTCCTTGGAAATGTTTCACTTTCTTGGCTTACAGGAGAGA
CTAGACAGGAAGGCCAGGCAATGCTTAGGCAACTAAAATGAGGTTGGGGGTAAATGCTAAC
GTCACCCTCACAGGATGGCCACGGGACTGTTATTTCGCAAGCTGGTTTTCTAGGCCTGT
TAGCTGGAAGCATGGTGAGCACCATTTCTGGACGCTCAGGCCGTGTCGGGCTTNAAGTCA
TCTTNCACCACACAGGTACCTTNGGGCCGGNTCTAGNAACTAGTGGGATCCCCCGGGCT
GGCAGGAAATTCGAATATCAAAGCTTTATCGATAACCGTCCGACCTTCGANGGGG

Sequence 1290

AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACCTTTATAGAGGTTGTAATAA
AACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAACTGCAAAAATTGCCAAATG
CGACTTTCTAAAAATGGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCAGGAGC
TGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAGCC
TCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCCACTAG
GCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGTAATGA
CTGGTATGGCAAAAGATTGGACTAAGACACTGGCCATACCACTGGACAGGGTTATGTTAA
CACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGATTG

Sequence 1291

AGGTCATAAAACATTATTCCTTCCCTTGGCCTAAAAACTCATCGCCACCTACATTAAAGCT
AATATGCCTGATTACTGTTTTAGAGAACTTATTTATTAGGGCAGTTCCAAGCTCAAAA
ATCGCTAACTGGCACCCTGTNGTACATAAAAAATGCACCCTAGACCCGAACTTACTAGAC
TCATTATAAAATTTCTTTAAGGTGTCCACGCAGTCCCTGGTCACACTTGAAGCAGTCCG
GAGAAATATCAGCCCTACCCAGTAATCCCCAGAAGGAACCTTACACTTTTTTTTAACTCTT
TTCTACAACCTTCATATTTTATAAATAAAAAAGACAAAAATGTGCGGGCCTGTGAGCTGAAGC
TTAGCCATTGTAACCCCTGTGACCTGCACATATCCGTCCAGGTGGCCTGCAGGAGCCAAG
AAGTCTGGAGCAGNCGAAAAACCACAAAGAAGTGAACAGCCAGGTTTCTGNCTTAATA
ATTAACCCAC

Sequence 1292

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAAAACATTATTCC
TTCTTGGCCTAAAAACTCATCGCCACCTACATTAAAGCTAATATGCCTGATTACTGTTT
TTAGAGAACTTATTTTATTAGGGCAGTTCCAAGCTCAAAAATACGCTACTGGCACCTTGT
TAGCTACATAAAAAATGCACCCTAGACCCGAACTTACTAGACTCATTATAAAATTTTNTT
TAAGCTGTCCACGCAGTCCCTGGTCACACTTGAAGCAGTCCGGAGAAATATCAGCCCTAC
CCCAGTAATCCCCAGAAGGAACCTTACACTTTTTTTTAACTTTTCTACAACCTTCATATT
TTATAAATAAAAAAGACAAAAATGTGAGGCTGTGAGCTGAAGCTTAGCCATTGTAACCC
TGTGACCTGCACATATCCGTCCAGGTGGCCTGCAGGAGCCAAGAAGTNTGGAGCAGCCGA
AAAACCACAAAGAAGTGAACAGCCAGTTTCTGCCTTAACTAATTAACCCACCTTACGAC
ATTCCACCATTATGACTTTGTCCACCATTATGACTTGTTCCTGGCCTGCCCAACTG

Sequence 1293

TABLE 1

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CCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTGTA
AAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAAACTGCAAAAAATTGCC
AAAATGCGACTTTCTAAAAATGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCTTCA
GGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGG
AAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGCCC
ACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATATGT
AATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCATACCACTGGACAGGGTTAT
GTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAGTTCTGGGAGAGGGACCAGA
TTGGGGGGTAG

Sequence 1294

CGAGGTACCGCTGTGTCCGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTACAGCTG
CTTCGTGGAAGACCATGTGCTCCGATGACTGGAAGGGTCACTACGCAAATGTTGCCTGTG
CCCACTGGGTTTCCCAAGCTATGTAGTTCAGATAACCTCAGAGTGAGCTCGCTGGAGGG
GCAGTTCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGC
ATTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCA
GTGCACAGCCTGTGGTCATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTC
CTTGCTCTCGCAAGTGGCCCTGGCA

Sequence 1295

CGAGGTACCTGTGAAGACAGCTACACCTGGTTTCCTCCCTCATGCCTTGATCCCCAGAAC
TGCTACCTTCACACGGCTGGAGCACTCCCAAGCTGTGAATGTCATCTCAACAACCTCAGC
CAGAGTGTCAATTTCTGTGAGAGAACAAGATTTGGGGCACTTTCAAAATTAATGAAAGG
TTTACAAATGACCTTTTGAATTCATCTTCTGCTATATACTCCAAATATGCAAATGGAATT
GAAATTCAACTTAAAAAAGCATATGAAAGAATTCAAGGTTTTGAGTCGGTTCAGGTCACC
CAATTTGAAATGGAAGCATCGTTGCTGGGTATGAAGTTGTTGGCTCCAGCAGTGCATCT
GAACTGCTGTGAGCCATTGAACATGTTGCCGAGAAGGCTAAGACAGCCCTTCACAAGCTG
TTTCCATTAGAAAGACGGCTCTTTCAGAGTGTTGCGAAAAGCCCAAGTGTATGACATTGT
CTTTGGATTTGGGT

Sequence 1296

CGAGGTACAGGAGCAACCTTCTTTCCACCATTACTGGGAATTCCACCACTATTTGCTCCC
CCAGCCCAGAATCATGATTCTTCTTCATTCCATTCAAGGACTTCGGGAAAAAGTAATCGA
AATGGTCCCGAAAAAGGTGTAAATGGGTCAATAAATGGAAGTAATACATCATCTGTAAAT
GGTATCAACACATCTGTACTTTTTTTTTTTTTTTTTTTATCTAAAAGCAACATAATTA
TTTTTCTTGCATTTTTTCAAGAACTCTTTTAATTGTCTAACACCTGATTCTAGTGTAT
AGCTTCTGATT

Sequence 1297

CGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGT
GTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACAAACTGCAAAAAATT
GCCAAAATGCGACTTTCTAAAAATGANAGATTCTGAGGCTTTGCATGTCTTGGCATTCT
TCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTG
CCCCTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAATA
TGTAATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCATACCA

Sequence 1298

CCGCGGTGGCGGCCCGCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACC
ACTTTATAGAGGGTGTAAAAATAAACCAGAAATCAAGGGAGAAAAGAAAAGATGAAAGACA
AACTGCAAAAAATTGCCAAAATGCGACTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGC
ATGTCTTGGCATTCTTTCAGGAGCTGAATGAAAAAATGCAACAAGCAGATGAAGACTCTG
AGAGGGGTTTGGAGTCTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAA
GAATAGAGATGTGGTGCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAA
GTTGGTATTCAAAATATGTAATGACTGGTATGGCAAAAGATTGGAATAAGACACTGGCCA
TACCACTGGACAGGGTTATGTTAACACCTGAATTGCTGGGTCTTGAGAGAGCCCAAGGAG

TABLE 1
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TTCTGGGGAGAGGGACCAGATT

Sequence 1299

CGCCCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGT
GTAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATT
GCCAAAATGCGACTTTTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCC
TTCAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGT
CTGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGT
GCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAAT
ATGTAATGACTGGTATGGCAAAAGATT

Sequence 1300

CGNCCGCCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTG
TAAAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTG
CCAAAATGCGACTTTTCTAAAAATGGACAGATTCTGAGGCTTTGCATGTCTTGGCATTCC
TCAGGAGCTGAATGAAAAATGCAACAAGCANATGAAGACTCTGAGAGGGGTTTGGAGTC
TGGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATANAAGATGTGNT
GCCCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGG

Sequence 1301

CNAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTACAGTATGGCTTAAAAGGCTCTGCCTT
AGATTCTAGAATCCAGAACATTTTCTCAAAGACAATCAGGGTATGGGGGAGAAGTTAGT
TCCAGAGAAGAGAGCGAGTCCAGGGTAGAAGGGATTCTTCTCTCCTGAGGGTCTATGGTC
TCCATTTTTTAAAGCAGCAGNGGTATCTATCCCACTCATGGCCTAGAGGTTGCACAGAG
CTGTCTGGCACCCGCTTCTTTGGCTTTTCTCTCCTGACACCCAGCAATGCTTACTCAGAG
CGTTGAAGGCGGCCAGCACTCGAAAGAGATTCTCTGATTTTTTGTGAACACCTGGATGG
TGAACCCATCAAGGGACTTCTGGATCTCGAAATTGTTTTTCAACCTTCGTGAACAGACA
GAACCTCAGCTTATCCC

Sequence 1302

CCGGGCAGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGGGTGTA
AAAATAAACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCC
AAAATGCGACTTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCCT
CAGGAGCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCT
GGAAGCCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGC
CCACTAGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAATAT
GTAATGACT

Sequence 1303

CCGGGCAGGTACTACCATGCCGGGCCAATTTTTTTTTTTGTTGTAGAAATGAGGTCTTGC
TATGTTGCCAGGCTGGTCTCAAACCTCCTGGTCTCAAGCGATCCCCCGCCTCAGCCTCC
CGAAGTGCTGGGATAAAAGGCGTGAACCACCATACCCAGCCAGTATTATCTTTTCATTTT
ATTTTCCAGTTGAGTATATTATTGGCTACATTTGCATACCGCACAAATTGTTCATTTTTA
AAAACCAATATTTTGTGTTTGTCTGTTGTCTACAATAAGGAGAATTCAGATGATAAACTT
ACAACCAATCATGGCCAAGTCCACTTGAGGAATTGTCTCTGTAGATTTATCTGTAGACTC
CCTAATA

Sequence 1304

AGGTACCAAATGAAGTGTGAAGACAAGGCCATCCACCACTTTATAGAGAGTGTAATAA
AACCAGAAATCAAGGGAGAAAGAAAAGATGAAAGACAACTGCAAAAAATTGCCAAAATG
CCGACTTTTCTAAAAATGGAGCAGATTCTGAGGCTTTGCATGTCTTGGCATTCCCTTCAGGA
GCTGAATGAAAAATGCAACAAGCAGATGAAGACTCTGAGAGGGGTTTGGAGTCTGGAAG
CCTCATCCCTTCAGCATCAAGCTGGAATGGGGAATGAAGAATAGAGATGTGGTGGCCACT
AGGCTACTGCTGAAAGGGAGCTGAAATTCCTCCACCAAGTTGGTATTCAAATATGTAAT
GACTGGTATG

Sequence 1305

AGGTATTGACCCACGCGCCCGTAGTTTTTATCTTTGACCAACCGAACATGACCAAAAAAC

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GGGGGGGCATTTACGCTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCGCCCGG
GCAGGTCGCACTTTTTTTTTTTTTTTTTTTTTACCTAGCCCATGTTACCAATCTAAATGAA

TABLE 1
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CTGTCTATGCATAGAAAAGTCTTTATGCCTAAGATAATTACTGGGATTAAAGAAAGTGA
GAAAAAAGAATAGGTGGGATTGAGAAATTAGGTAAAAACAGAAGAGGCCAACTAAACCCA
AGTGCTGCCCTTCAAGGGCTCTAGTAACCGGACGCGTGGGTGGAAGCTTGACCT

Sequence 1311

ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTAATCCCGTCTT
ACAGAAGAGAAAACTGAGATTTAGCAACATAAAAGTATTTCCCGTAAGTAAACAGTAGAG
CCAAGATCTTGACCTACGCCATCTGATACCTGAGCCCATGCTATAAAAGAGGAGCATTAG
AAATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTATTTGCTTAGCACTGTATTC
AGTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTATCATCAAAAAAGTTTAAATCT
AATCAGAGAAT

Sequence 1312

TACTTAGGGCGAATTGGAGCTCNC CGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGCCACATTTTCAATTTAGCCATTTTCTCTTATTCACCTTTTCTGCTAATTACTC
TGTAATTCCTACTAAGAAAAGTCAATAGATAATTCCAATAATGACTTCACTCCTGAGAATT
TTATTAGCTGCTAACGCTTGCTCATCATAAGCACTCATATGTTTATTGAGTAAATATTT
ATTGAGTATTTGCTATGGTCCAGGCACTGTGCTAAGTATTGAGGATAAAATGGTGATTGA
AACATTTTCCCTTCTTGATTTTAACTCTACAAAATAAAAAGTATGTTAATATCAAAAA
AAAAAAAAAAAAAAAAAAGGN

Sequence 1313

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAAAGCCTCACTCACAATTATT
TTTGAGATAGCTCCCAATGAGTTTAATCACTGCTATGCCAGGTGTGTGAGGCTGCTGTGG
GACAACAATCTTGATTCTAGAGAGTCATAAATTTCTAGGGACTACAGGCTCCTGCCAC
CATGCCTGGCTAATTTTTGTAGAGATGGGGTTTACCCTGTTGCCCAAGCTGGTCTTGAA
CTTCTGAGCTCAAGCGATCCACCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTG
GGCCATCACGCTTGCCCTAGAGTAATATTCTCTATTATCAAGGTAGAAAGTTCAACATAT
ATTCATTAGATCTACTTTATAGATACTGTTACTCAGATCACTTATATCGTTATATGTATT
TTTTGTCTTCTTAACCTCAAGTCTTGATGAGAGAAGAGGTGTTTTAAATTTCTCTGTTA
TTTCTAGGGTTCTATTCATTT

Sequence 1314

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTAGATGACAACATC
AAAACATACTCTGATCACCCCGAGAAAGTAAACAAAGATGATGAGGAATTCATAGAAAGC
AATAAAATGCATGCTATTAATGGAAGAATGTTTGAAAACCTACAAGGCCTCACAATGCAC
GTGGGAGATGAAGTCAACTGGTATCTGATGGGAATGGGCAATGAAATAGACTTACACACT
GTACCTGCCCGGGCGGCCGCGCCCGGGCAGGTCCGGGCAGGTGCTGTGAGTGCTCTGG
CGAAGTTTGAGGCCGAGAATGAAGAGATGTTACCCAGTATCTTGGTGTGCTGAAGAGGT
GTGTGATGGATGATGACAATGAAGTAAGGGACCGAGCCACCTTCTACCTAAATGTCTGG
AGCAGAAGCAGAAGGCCCTTAATGCAGGCTATATCCTAAATGGTCTGACTGTGTCCATCC
CTGGTCTGGAGAGGGCTCTGCAGCAAGTACCT

Sequence 1315

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCAGAT
CAGACGTGGCGACCCGCTGAATTTAAGCATATTAGTCAGCGGAGGAAAAGAACTCTGAA
TCCGACCAGTGTAGGTGATTACATTAGCCTTTGAAGTCAACACAAAGTTTAAACACCTG
CCCGGGCGGCCGCGGCCGCGGGCAGGTGTACAAGCTTCGACCCACGCGTCCGGCTGAAGA
CATCCCTAGGGCAGGTAGCAGAATACCTAATTCAACCTAGAGAGGCACAGGCTGCACGAG
AGTCTCTCAGATAAAGCCCCATTGAAAATAAATTTACAATCTAAATTTAAAACCCGTT
AAAAAAGCAGCACAGCATGAGGAGTCAGTAGATACACTGAAAGCAAGATTAGATCTTCAA
GACTTTCAAATATAAAATTTAGAAAATTATAATAAATTATGAAATAGAGGCCCTTTTCAT
GTCAAAAAGTCATGAAAG

Sequence 1316

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGCG
AAAAGATGAGGCAACAAGTAAGAGAAAACAGCATTGAGCTTAGAGAATTGGAGAAGAAAT

TABLE 1
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TAAAAGCAGCTTACATGAATAAAGAAAGGGCAGCTCAGATTGCTGAAAAGGATGCCATTA
AATATGAACAAATGAAACGTGATGCTGAAATAGCCAAAACCATGATGGAAGAACAAGA
GAATAATAAAGGAAGAGAATGCTGCAGAAGACAAACGAAACAAAGCGAAAGCACAGTACC
TGCCCG

Sequence 1317

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAGCGTGCATAG
GGACTCTTGCCCTTAAGGAGTGTAACCTTGATCTGCATTTGCTGATTTGTTTTAAAAAA
CAAGAAATGCATGTTTCAAATAAAATTCTCTATTGTAAATAAAATTTTTCTTTGGATCT
TGGCAAAAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCCGGGCAGGTACACTTGTTGAT
AAGAGTTTTCTGAAAACAGTCTATCAAATATAAGAATGGTTTCTATCCAAGAATCAGCA
GTGAGGGAAGAAATACTAAACACCTGTCAAGAAATCAGTTATTCATTTAAAAATAACA
GAACCAGTGCTGCTCTGTGCATAAAAAAGAACATGTAAATTTATTTTTATAGGCTTTG
GTAACATTATATCCCCACAGAGGCCTTCAATCCTACTTAAAGATA

Sequence 1318

AGGTCAAGCTTCGACCCACGCGTCCGGTTACTAGAGCCCTTGAAGGGCAGCACTTGGGTT
TAGTTGGCCTCTTCTGTTTTACCTAATTTCTCAATCCCACCTATTCTTTTTCTCACTT
TCTTAAATCCAGTAATTATCTTAGGCATAAAGCAGTTTTCTATGCATAGACAGTTCATT
TAGATTGGTAACATGGGCTAGGTAAAAAAAAAAAAAAAAAAGTGCGACCTGCCCGG
GCGGCCGGCCGCTCGTGATCTAGATCCCCGACCT

Sequence 1319

GCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGTTT
GGGTGGAATTATAATATTTTAGATAAGATTAAAGAGGATTCTAATTCTAGCTACTTGATA
GGAATGCGAATGATGATAAGGCTTTTAGAGTTAGATAAGAGAGAGGGCTAGCACCTGAT
ATTCTGTAATTGAAACAGAGTTTCAAGTCCTTTGGTCAAGTATTACCCTTATTCCTTCAG
GAATAGTAGATATTTAAGATTACAGATAGGTTATCTTATCTAATTTACCTACCTATTGT
TGAAATTATTTAATTTGCATTTAACTGTGTTTTACACCTGCCCGGGCGGCCCTCTTACC
TGCTTCTGACCTTATGCTCAAGAACTCCCCTAACTCTGGCCAGAGCTCAGCTTTGGCAAC
TCTGACCGTTGAGCAGCTCTCATCCCGGTTTCCTTTACGT

Sequence 1320

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTT
AAGCTGCTCCTTGAGGATAAGGGCTAACTCACAGGCAGTGACCAAGAGCCACTATAAAA
AGATCCTTAATGAGCAAAATATATCCCTATTATTTTCTACAAGTTGCTTTTTACTTGA
GTAGGAACCCCTTGATTGATTTTTGCGGACNCGTGGGTGGAANCTTGACCT

Sequence 1321

GGGCGAATTGGAGCTCCCCGCGGNGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGT
TTGTTTTTTTCTTACGGCAACTCAAAGCAAAGAGCTGGAGGAGCCAGCCATTATNATTGC
TACTCTCATCGCTTAGCGCCCCAGGTGGGATGTGTTTCCAAAACACATTTTGTATTTA
TAAGGAAATGTAGTTAGGATTAATTTTATTGTCTAATTAGAACTCACATTTTGGTTAAA
TCCTCAATTTTCAATAAAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCCGGGCAGGTACA
ATTTAATTTTTCTGCTTGCCCAAGAAACAAAGCTTNTGTGGAACCATGGAAGAAGATGAA
AATGAGACTGGCAAAGAACAATGCTGAATCTGAAGAAGATTTGGGCAAATAATCTGCAT
ACTTTTAATTGGGAATAAGATGGAAAATATGAATGCTAAATCAAATTTTTTA

Sequence 1322

CCGCGGTGGCGGCCGAGGTACAAGCTTCGACCCACGCGTCCGCTCACTTCATCCTCCCAG
CAACCTATTATGATCCATTGCCACACCAACTTGCTGATGAGGAAAGTGGGGCTTAAGGAA
ATTAAAGAGCTGTTGTGGGACTTCCAAAGCAGAAGACAGTAGGCTTTCAGAAATTTGATA
AAATAGCACTTTGCATTTCTTGAATCTTGAGCTAAATGGAAATTAATACTAAACATTCT
CCACTGGTAAATAGAGAATAAGGATATTAACAGTAAAAGAAAAGAAGAAGAAAAGGAAA
TGTGCTTCCACAGATTTAGAAACATAAGTAACAATCTAAGTTAAGGCTTTGGCACCTGCC
CGGGCGGCCGGCCGCCGGGCAGGTTCAAAGACTACCAAAGTATGTATTTGATTTTCACA
TGCAAACAACCTAAA

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Sequence 1323

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTC
CGCAGAAACCTTGCCATCATTCTTACTGCTGGTTTGCATCTCATTTATGGTGNNTCTGGG
ATTTCTTCTCATGAACAGAAAGATTCAAGTGGCTGTTATATGCCTTGTCAATTTAATGTAT
TGCCCTATCCTCTTTTTGATCAAAGATAGAGACTAAGACTGGGAATTATGACAGAAAAAG
TCATATTTTTCTTTAAATGATTTTGAAATGTTAAATAGGCCAATATGAGTCAAAGTGCA
AATTTTTGGTGACCTGCCCCGGGCGGCCGCCGCCGCCGAGGTACTAAGCATTTCAGT
TCCAGGAGAATAAAAGAAATTCCTATTTGAAATGAATTCCTCATTTGGAGGAAAAAAGC
ATGCATTCTAGCACAACAAGATGAAATTATGGAATCAAAAGTGGCTCCTTCCCATGTGCA
GTCCCTGTCCCCCGCCGCGCAGTCTCCACACCCAAACTGTTTCTGATTGGCTTTTAGCTT
TTTGGTGGTTTTTTTTTTTT

Sequence 1324

CCGCGGTGGCGGCCGCCGCCGCCGAGGTGCCTAATATATTTACTCTCTGGTCCTTTACAGGA
AAAGTTTGCCAACTCTGGCTTAGATGATCACCTGAGGCCAAGGAGCCTCGCCCTTGAGC
ACAAGACTATGTAGTCAGTAAAGCACAAACAAATTTGGGGCTTCCCTAGCAAGGTTGGA
AAGGCGGAGAAGAAATGGATTTGGATAGGTAGTCAACAATGTCTGTTTTATGTTACCACA
CATTTTCTCGAGAAATTTCAATCAGCTCTCTGAGAACAGATTTCATCTTTAAATGAATGTT
CATAGGTAACAGCAACTCATGCATCAATGTTGCAAAGTGAGCTCATTTTCACATTGCTTC
AGGTTAGGCAGAAGGTTTGGTAAAGGGATTAACGTAATTGTTTCTTGNTGTTTACAAAA
AGAAGTCCAGTTGGCATGCCACATAAAATCTTCTGNATCTCACTCTTGTTACATTTC

Sequence 1325

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGTCCGCAGAGGCCCC
AGGCTCCCAAACCGACAAAGTGAAAAGAGACCAGAGAGGCCAAGCATATTGACTGGTGCT
GTTCAAGGGCCTGCTCTTTTCCACTCACCCTTGTGTTTGTCTGCTTGTACGAGGAGAGTTG
TTCCTGTATGTGGCTGCTCTCAGATCTTCCAAAGCAAGCCAGTCATTTGAAGAGGTTTTTC
TTTTCATGCTGGAGGGCAGGCTAAGATCAATGAGTGGAAGAGAGAAAGGCTGTTTTAGCT
CAAGTTAAAGGAACACCTTCTAGCCATCAAAGCCGCCCAACAGAGGCAAGGGCCACCACA
CATGAGAGAGCGCTCTNTCCTTAA

Sequence 1326

GCGAATTGGAGCTCNCCGCGGTGGCGGNCGCCCGGGCAGGTACCAAATAATTACCAACA
NTACATTATGTACACCATTTACAGGAGGGTAACACAAACCTTGACAGGTAGTAACTTTTTC
ACCCACATNACTGAACGCTTAACACTCCTGGCTGTTAATTGTCAGTTCAGTGTTTAAT
CTGACGCGAGCTTATGCGGAGGAGAATGTTTTCATGTTACTTATACTAACATTAGTTCTT
CTATAGGGTGATAGCGGACGCGTGGGTGCAAGCTTGACCT

Sequence 1327

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCTGTAGCCTATGACTTG
AGTCTCTTGAACCTTCTAGGAAGAGGCAAACTACAACTACTAGGATTCTGATTTAGATA
TAGGCATTCCAGAATCTTCTTTACGAGTTACCTGCTAGTATAATCTCCACAACCTTGA
ATGGCCTTGGTTGTTCTGTAATTGCTGCCAAATCATCACAAGCTGTACCTGCCCGGGCG
GCCGGCCGCCCGGGCAGGTCAAGCTTCGACCCACGCGTCCGGATGGGAATTCAGGTATGA
AAGAAAACAGGCAAGGAGGCACTGAGGGAGAAAGACACAGACTTTATCGCTCTGTGGCTC
ATTGTTACTGGAATATTCTAAACTCTTGTTACATGCTATTATGACTTATAAAGCAGCA
ACAGCTGAGGCGCACCAAGGACACAGCTTCCATTTCTTTAACGT

Sequence 1328

AGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGA
AAAATGGGAGACAATTTACATGGACTTTGAAAAATATTTTTTCTTTGCATTCATCTC
TCAAACCTAGTTTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTGCAATCAA
CCTTACCAAAAAAAAAAAAAAAAAAAGACCTGCCCGGGCGGCCGCCGCCCGGGCAGGTA
CAAGCTCGACCCACGCGTCCGAAATAATAAGCTAGAAGTAATTTTTCTTTTGTCTA
TTTTCCAAATTGACTCGATATTGATGGCTACTTTTGTAAGTTTTATTAAAGTTAAAGG
GAATATTTATTGATCACCTNTATGTGCTCAGTACCT

TABLE 1

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Sequence 1329

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGAGGTGCTTCGACCCACGCGTCCGC
TTGGGGATTTTCGAGGAAGGGTTCATAAGGGAGATTTTAGCTGAGAAATACCATTTGCACA
GTCAATCACTTCTGACCAAGTTATCAGAAAAAGGAGAAAAGAATGTCTCCCCACTAAATG
TTCTAGGGTGGTGAGAAATCTAGGGTGGTTATCTAAATCAACAATATTTAGATATTCCAA
TATCTAAATATTGTTGGAAATACTCTCCTGAAGTGTTTCATTGAACTCTAAGAGAGACAGC
TTGTGTATCAGTGGCAGGGTTAAGGTTTCATTTTTATTCCCATATTAATCCTTTAATAT
TTAGACAAATTTCTTCTGAGTTTAAGGATAAAATGGGATGGGTTCTGCCTGGGCCTGGC
CCTCATGGGGACATCAAAGGGCAATGTTGCAAAAAAAAAAACC

Sequence 1330

AGGTCAAGCTTCGACCCACGCGTCCGTGAACCTTTTATCAAGGCTTTTGCTCTTTTAGACT
TGAGTTTATCTTTATAATTAAGGAGAATGGTTTTTAAAATTTAGTTCCTCTGACACCCCA
AAATTATCAAAATAAATTATGTTGTAGTGAATCTGTGTTTTGAAAGTCATTGATAGGACT
TATATGAGTCAAAATTTTATGGATTATAAACTAGGCTTTATCTGGTTGAAATAATTGCA
ATACAAGAAGCACTTTATTAATTAGACCTAAAGTCACAATCTTCTTTGCTGCTTT
TTAAAAATTACCTATTACCTTTAAAGATCCCAAATTTAGAAGAGGAATTAATAATAAAG
TTAATGCAATAAAACACTTCCACAATATTCTATTACTTCAACCTCTAATCAATGAAA

Sequence 1331

AGGGCGAATNGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCTAAAATTTAAAGTATAATA
ATAATAAATTTTTGTTTTAAAAAAGAGTGTTGTCTTTGTCTTGTATTTCTGCAGTTTG
CATGTGATATTCTTAGGTATAGATTTTTTTTAGTATTTGTCCTGTATATTGTTATTGAG
CTTCTGGGATCTGTGTTTTGGTGTCTATCATTAACTTTGGAATATTCTCAGTCATTACTG
CTTCAACATTCACTCTGTTGCTTTTTCTTCTGGAATTATCATTACACATATATCACA
CCTTTTGTAATTCTCCACAGTTCATAGATATTCTGTNGTATTTATTTATTTTTCTCTT
TGCTTTTAGTTTTAGAGATTTCTATTGACATCACTTAAAGATGATTGATGAGTTGATGA
GAATTGAGAGAATTGATGAGAATTGTTGATGAGAATTATT

Sequence 1332

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGCGGAGGTTTCCTGCATTTG
TAATGAAGAAATAGGCTGGTCTCAATTTGCAGAAGTTGTATCATCATAGGTCATACCT
AACATTCTGTTGTCAAGAGCAAAAAACCCCTTGGGTTCTCTGGATCTCACACAGCCCA
CAAACCTTCAGAATGTGGTTCCTTCCCGCAGGCTTTGTCACACTTAAGATCCAAGAACAA
ATCAGCCTGGCTTAAACATGGGGTAGATGGCAAGAAGGATAATGCGGACGCGTGGGTCTGA
AACTTGACCT

Sequence 1333

CCGCGGTGGCGGCCGAGGTAGCGGTGCGCACTTTTTTTTTTTTTTTTTTAAATAGAGA
TGAGGTTTTGCTATGTTGCCAGGCTGGNCTNCTGGACTCAAGCAATCTCCCACTTCAGG
CTACCAAAGTGCTGGGATTTACAGGCATGAGCCACCTCTCCAGTCTCAGTTATTATTT
AATAAATGAGACTGAACGTCCTCTTATAAGGCTCACTCCCTTGTTCCTACTACATTTGCT
CTGTTTAAGTATCTCTTTAAATCTTCAGTTAAGCGGACGCGTGGGTCTGAAGACCTGCCC
GGGCGGCCGCGGCCGCGGCGGAGGTATTAAACAGGTGCTTGCAGTTTGTGACTTTTTTGAA
AAAATCAAGTTGTAAACTTTTATTACAAATTAATAAATGAAGTTCTTAAAAATCTCAACT
GACCAGATATGAAACAATTTAAAAACCTTTAAGGCGTATTGAGAAAAACCAGGCTTTTTT
AAA

Sequence 1334

ACTTAGGGCGAATTGGAGCTCCCCGCGGNGGCGGCCGCTCACCTGCCCGGGCGGCCGCTC
GAGGCCGCTCACCTGCCCGGGCGGCCGCGCACCTTTTTTTTTTTTTTTTTTNNCAAAA
CAAAACATGCTTAGCATGCACACTTTTACCCTTTTTTCGAGTGAAAGTTTATTGGCAA
TATTAATTTACCCCTANATAGGATATGAGAATGTTTGTATAAATCACAATTTATAGTAT
ATTAATGCCATGTGAGAATTTTGTTCCTCAAGTAAGAGCTCACATGGAAGTTGGTCATTA
AACCTTAAGAAACCTTTCTCACATATCTATAGGCCTCAAATTGAAATAATCTATAAATG
AATTTGTAGATTTCTTTTTAGTTTAATTCCTGAGTATACAGGGCAAAAGCTTATATCCTT

TABLE 1

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TATATAAACTTCTGCTTTGGTCTAAAACTGATATATCTTCACGTTGAGGTTTCATCTGAA
ATGCNCCACCGTTTGGCTGACTTGCTTCAATATGAATTTGGATGGCTATAAAATTGACCTC
GGCCGCTCTAGAAGTAGTGGGATCCCC

Sequence 1335

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGCGGGCGGCGCTCGAGGGCCG
CACTTTTTTTTTTTTTTTTTTTGGTAAACAGGCGGGGTAAAGATTTGCCGAGTTCCTTT
ACTTTTTTAACTTTCTTATGAGCATGCCTGTGTTGGGTTGACAGTGAGGGTAATAAT
GACTTGTTGGTTGATTGTAGATATTGGCGGACGCGTGGGTCTGAATCTGTACCTGCCCGG
GCGGCCCATAGTTTGTCAACCACTGGTGAAAACCTTAGTTATATATGATCTGCATTTTC
TTGAACTGATCATTGAAAACCTATAAACCTAACAGAAAAGCCACATAATATTTAGTGCA
TTATGCAATAATCACATTGCCTTTGTGTTAATAGTCAAATACCTTTGGAGAATACT
TACCTTTGGAGGGAATGTATAAAATTTCTCAGGCAGAGTCCTGGATATAGGAAAAAGTAA
TTTATGAAGTAACTTCAGTTGCTTAATCAAATAATGATAGTCTAACAAGTACGCAAGG
ATCCTCATCTNGAGAAGTGCTTAAAT

Sequence 1336

CCGCGGTGGCGGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGAAGATCCTGCGGAAGGAA
TATGTTTTTGGCTGACTCCAAAGTAAGTGACAGCAAACTTCTAAATGGGCTGTGAGGTAG
GGAGGGGACACAAGCGTTTTGAGGCTCGCTGNGTGCCAGGGAGTGTATCATTAGCTCACT
CAATCCCAGAACCAACCCATTTACACCTGGGAAAGGTGAAGTTAGAGAAGTTGAGGATC
ATGTTCCAGGTTGGCCTGGATTTGAGCCATCACTGTCTCAGGAGTAGGGAGGCTTCCAC
TTTGCCAGCTGCCTCCAGCCTCGAGGCCACATCCTTTATGACCCACATCTAACTCAGC
CCCACACCTGGGGGAAAGGCTTTCAGCTTCTCTGGGCTGGACTTGGGAAATCTTTGGGAC
ACTCCTGACCTGCCCCGGGCGGC

Sequence 1337

CCGCGGTGGCGGGCCGCCCCGGGCAGGTGTCCCATGAGGGCCAGGCCAGGCAGAACCCAT
CCCATTTTATCCTTAACTCAGAAGGAAATNNGTCTAAATATTAAGGATTAATATGGGA
ATAAAAAATGAACCTTAAACCTGCCACTGATACACAAGCTGTCTCTTAGAGTTCAAT
GAACACTTCAGGAGAGTATTTCCAACAATATTTAGATATTGGAATATCTAAATATTGTTG
ATTTAGATAACCCCTAGATTTCTCACCACCCTAGAACATTTAGNNGGGAGACATTCTT
TTCTCCTTTTCTGATAACTTGGTCAGAAGTGATTGACTGTGCAAATGGTATTTCTCAGC
TAAATCTCCCTTATGAACCTTCTCGAAATCCCAAGGT

Sequence 1338

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGAGGTGCTTCGACCCACGCGTCCGCTT
GGGGATTTGAGGAAGGGTTTATAAGGGAGATTTAGCTGAGAAATACCATTTGCACAGT
CAATCACTTCTGACCAAGTTATCAGAAAAAGGAGAAAAAGTGTCTCCCCACTAAATGTT
CTAGGGTGGTGAGAAATCTAGGGTGGTTATCTAAATCAACAATATTTAGATATTCCAATA
TCTAAATATTGTTGGAAATACTCTCCTGAAGTGTTCACTGAAGTCTAAGAGAGACAGCTT
GTGTATCAGTGGCAGGGTTTAAGGTTTCAATTTTTATTCCCATATTAATCCTTTAATATT
AGACAAATTTCTTCTGAGTTTAAGGATAAAATGGGATGGGTTCTGCCTGGGCCTGGCCC
TCATGGGGACATCAAAGGGCAATGTTGCAAAAAAAAAAACCTGCCCGGGCGGC

Sequence 1339

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGATTCTCTGATTAGATTTTAACTT
TTTTGATGAAATATTGAGTCTTAACTACTTTAAGATGCCATAATACTGAATACAGNGCTA
AGCAAAATAAATATTGACTAGTTCTCATTTCTATCTTTCAAATATTTCTAATGCTCCTCT
TTTATAGCATGGGCTCAGGTATCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTAC
TTACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTTCTGTAAGACGGGATTAA
AGTACCT

Sequence 1340

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGCGGGCAGGTCTACTCAAGTAGTCT
TTACCCCTACTCAAGTAGGGGTAAAGTGTAAGCAAGGAGTTTGATNTGTGTTNGCTG
ATTGTGAACCATCAATTGAGATAACTCACTACCTTCAGGCCAGCCAGTTACATACTTTTG

TABLE 1
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AAAAGCCAAGAGTGAAGCAGGGTTGTTTTTCATCCAATTCTTGGTCTTTTTGTTAAAGGC
AGCAATAAGATAGGGTGGTTTCGGGCAATCACTTAGCTAATTGGCTCTCTATAGTCATAC
CTGGATAATATTTGTAGTCATACCTGGGATAATATTTAAAGGAAGAACTAAACATAGT
CCTTAAGTAGGAACCAACTACAAT

Sequence 1341

CCGCGGTGGCGGCCGAGGTCCTAGCTTGAGTCGACCCACGCGTCCGGCCGCTGTTTCGTAT
TTCTTATTCTACAACAAGGGNGCAGCCTANAGGCAAAACACATCCCATTGTCATTTTTTT
GTAAATAAAGTTGTATTGGAACATGGCCACTCTCATTTGTTTTCTATTATTTATGGCTGC
TTTCACTTACAACCTGAGTGGTTGCCACAGAACTGTATGGCCTGCAAAGTCTAAAATAT
TACTATGTAGCTTTTTCTTTCTTTTGGAGACAGTGTGCCACTCTATTGCCCAGGCTG
GAGTGCAGGTGGTGTATCATGGCTCATTGCAGCCTCAAACCTCTGGGCTCAAGCAATCCT
CCCGCCTCGGTCTCCAAGTAGTTGGGACTACAGGCATGAGCCACCATACCCGGCTAATT
TTTTAAAGTTTTTGGTAGAAATGGAGTTTTTAATGTTGCCCAGGCTGGTCTTGAATC
CCTGGTCTTAAATGACCCTTTTCCCATCAG

Sequence 1342

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAGTTATTTATTGATTTAATCAT
TGTAATCTCCAATAGAGATTACAATAGAGATCTCCAACATGATTTTCATGCATTTAGAGGA
GAAATATTTCTGGTTAAGTGGAAAATTGTGCGGATGTGGCTTCTGGAAGACCTTCATTC
TAAAGCAGCGGACGCGTGGGTGCAAACTGCCCGGGCGGCCGCGCCGGCGCCGGCAGGTCTG
CAATCCAGCTAGGCATGGGAGGGAACAAGGAAAACATGGAACCCAAAGGGAAGTGCAGCG
AGAGCACAAAGATTCTAGGATACTGCGAGCAAATGGGGTGGAGGGGTGCTCTCCTGAGCT
ACAGAAGGAATGATCTGGTGGTTAAGATAAAACACAAGTCAAACCTATTTCGAGTTGTNCA
CAGTCAGCAATGGNGATCTTTTTGCTNGTCTTGCCCATTCCTGGA

Sequence 1343

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCAGCTTTAAAACCCATA
CCCCTCCAGGGTCTTTTTCTGTTGCTGGTGAAGTGCATTTTTAAAAGAGTNATTCATAC
CATCAAGATTTTTGACAAGAAAATTTAGAAAACTGTGGAAGAAAACCTGATTGCTCTTA
GTTCTAGCCATGTGTAATTGCTGACCACCTGAAATGGTCCAAACTGAGATTTGCTAAAGC
ATAAAATACACACCATATTTCAAAGGTTTTTAAAAGAATGTAAACATTTCAATTAATTC
GGACGCGTGGGTGCAAGCTTGACCTGCCCGGGCGGCCGAGGTGGATGGACCCATCCATTC
AGGCAGGGGGTGTGGGGTGTCCCCTGTGCTTAGAAACCACCTAGCATCATAAGCTGCAAC
AGCACTTTATTGGGATCTGAGTCTACAGTTCACATAGGGAGGTGAAGCCGTGGGAGAAGC
AGGGNGTAAAAAAGGGGGGGGACTTTACCCCCCTAAGGACAGGNTGCTTCC
AAACCTAACAAAAAC

Sequence 1344

CCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGGTAATTTGTTGCACACTAT
GTAACAAAACAACTGAAGATATGTTTAATAAATATTGACTTATTGGAAGTAAAAA
AAAAAAAAAAAAAAAAAGTGCGGCCGGCCGCACTTTTTTTTTTTTTTTGCTGGGGTTT
TTTTCTTTCTTTTTTTTTCAGCTACAGGAATTTAGCCAATTCANAGGAAATCTTCCCCA
TAATTATGGAACTTTNTTACAGATTTTACCAAGTCTGGTCAACCCAATAAGAAAAAGACT
GAAATAACAATAACAACCTTCAACAAATAAAAAACAGTTAAGCTAAATAAACAGATGATT
GCAGAAATTTATGTGATTACTGGGTACCTCGGCCGCTNTAGAACTAGTG

Sequence 1345

CCGCGGTGGCGGCCGCGCCGGCAGGTACCAAGTTTGAGTTGAAACGGTATGTGACTTCCC
CAGCTGCACCCTGGGCAGTGACTGCATGCATCACTGAGAGGTCCTGTCTACAGCAGATAA
AACTCCACAGATCACTCCTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCC
AGTGCAATTGAGGCTGGAAGCAGGAGCAGAGACTCTGGGATATAGTGCGAAAGTCTCTTTC
CCCTGTAGTTGGGCTAATCTGGAAAACTCAAAACCTGGCCTGATTACCGAGGTTTCTT
TTATGGATATTTAGTATTTAGATAAAATTTTACAGTATTCTTGAAATGAACCCAATTAA
ACACATAGTTCTCAGTCTTGACCACACATTAAGAATCATCTGGTAGACTTCTGTAAACTA
CCAATGCCTGGCCA

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Sequence 1346

CCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTTTACCTGAAAATGCTTATTCTAGC
TTCACATTTGATTGTTTGGCTAAGAAGAAAATTATTTATTAGACTTAATTTTCCTCACGA
GTTTAAAGATTGCTTCAGATCTTAACTTCTAATGAGGAAAGCTGAGAAGTCCAATGCCA
TTCTGATTCTTGCAACTTACAAGTAGTCTTTTTTTGTCTANACGCTTTCAGGACCTTCTT
TTTTCTCAGTCAGTGTATCCAAACCTTCACAGTGATATCTTTTGGGTACCT

Sequence 1347

CTCCCCGCGGGGGCGGCCGCGCCGCGNAGGCNAAGCTTCGACCCACGCGTCCGCTTTAAAGG
GAATTCNTGTAGAGTGGGAGGCGAACACGNCCTGGNNCTTCCAACCTCAGGAATTCTCGTG
GCTGGGCTGGGTCAGCGATGGCTTTGTCTCTTTATGTCTAAAGTGCCCTATGGCATGCTG
AAGGTTACCTAACCATTCTTTAAAAGGAGAATGACCCTCCATGGGAATGGCCAGCCTGCC
AACTGTGCAATTGAAGAAGACCCGATGGATCAACCCCATGTCTTCCTTGGGGAGAAAGTG
CATAAACCCAGGGGTCCCTTTTTTTTTT

Sequence 1348

AGGTCAAGCTTCGACCCACGCGTCCGCAAAAATCAATCAAGGGTTCCTACTCAAGTAAAA
AGCAACTTGTAGGAAAATAATAGGGGATATATTTTGTCTATTAAGGATCTTTTTATAGTG
GCTCTTGGTGCCTGCTGAGTTAGCCTTATCCTCAAGGAGCAGCTTAAAAAAAAAA
AAAAAAAAGT

Sequence 1349

GCGCGTATACGACTCCTATAGGGCGAATTGGGAGCTCCCCGCGGTGGGCGGCCGAGGTA
CAAACCTATGTATCTGAAACACTTCTATTTGGCAATTTTATAACAAATCAAATTTTAAAA
GAACAAAAGAGATTGCAGATTACTTCGCAGATACAGAATAAAGCAATTGATGAAGTGCTT
AAGCAAAAGAAACAACAAAAAAGAAAACACACTGCTTTCTTTTTAAAAATAAAATCAC
ATTGCTATAGATCAAATGGATAATACCCTTATTAACAACCATTCAGAATGTCTTATAG
TAGCAGTGCTTTTATTTGCACTTCACTTAATTTTATAAGACTCATTTTCATGTATATAGC
TCTTACCCCCATTGTTAACGAATAAAGTCTCTCATAATTTTACACTTTTAAATTTTT
AAAGCAAATGAGAAATGATTTATGTATCGTGGAAACCTTCCCATTTTGAACCAAAGGT
TTAATCTATATTTTGNCTAATATTTCTTTAAAAAAT

Sequence 1350

CCGCGGTGGCGGCCCGCCGCGGCAGGTACTATCTATAAAGGAGGTTTGATGTTTTCTTA
CTGTTTTGTAAATATTTTCAGCATTATCTTTAAAAAGTAAGGACATTGGCCGGGTGCGGT
GGCTCATACCTGTAATCCAGCGCTTTGGGAGGCNGGTGGGTGGATCACCTGAGGCTAGA
TAGTTTTATTCACCTGGCTGTTTCACCAAAAAAAAAAAAAAAAAAAGTGCGGCCACCT

Sequence 1351

TATAGGGCGAATTGGAGCTCCCGCGGTGGCGGCCGAGGTACTGAGCAGGATTACCATGG
CAACAACACATCATCAGTAGGGTAAACTAACCTGTCTCACGACGGTCTAAACCCAGTAG
AAACAAAGTGCGGCCGCGCCCGGGCAGGTGCCGCACTTTTTTTTTTTTTTTTTTATAG
AATAGGATTGAATTTTATTAACAAACAAAAATAAATCTAAAAAGCTTCCTTCAGTTACAAA
TATGCACAAGAATTTCTGCATTACATCATTTGACATAAAATGTTCTGAATGACAGAAGTA
GAAGTAGAACTTACTACCATTTGAAGACAGGAGTTGAGCGCTGAAAACACACACATTTA
TAGAAGAAACCAAAGTTTCACAGGGAAGACCTGTGATCTCTGGCTACAGGAGCTGAAAT
TAGGAACATGAAAGAACTTGGAGAGAGAAGACATTCAATACTCTAAATACTTCAGCAA
AAATAGTCAAACATNTGTNAACAACCTTGNACAAAACCTTTATATGGTGGGGGGTGGCTAT
GCCGGAATAANTCTTNACTGGNTATTATTCACCTCAAAAAGGGGGNTTTTAAATGNTCACG
AATCCTTCCTTTAAAAATAAANAAGCNTGGNTTNTTTTTCTGGNGTCAAGAGTAAAANG
TANTAGGNNACTCAGGGATGGTTTGGAATTTTAAACGGGGCNTTCCACCCTTGGTGG
CTNGTGGCANTTTANCCCAAAACGGGCNAAANAACCGGCCCGNGGTCAACTTGNAACCT
GGCGGNTTNAATANGACCCCGGTGGGGGATTNANTNAGNTTGANCCGNNNCTTGGG
GGGGCCGCCC

Sequence 1352

TABLE 1

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CGAGGTCAAGCTTCGACCCACGCGTCCGGTACTAGAGCCCTTGAAGGGCAGCACTTGGG
TTTAGTTGGCCTCTTCTGTTTTACCTAATTTCTCAATCCACCTATTCTTTTTCTCAC
TTTCTTAAATCCCAGTAATTATCTTAGGANAAGCAGTTTTCTATGCATAGACAGTTCATT
TAGATTGGTAACATGGGCTAGGTAAAAAAAAAAAAAAAAAAGGTGCGACCTGCCCG
GGCGGCCGCTCGAGGCCGCCCGGGCAGGTACTATGTCGATTGACAGAACATTCAGAAGA
TTCTCGGCCTTGCCCCCTTACGAGCCGCCACCAAGCAGGCAGGTGGATTTCTTGGCCAC
CACCTNCTTCTGGGAAGTTCTTGAAGTCAAGAACTCTTATTTCTATCATTCTTTCT
AGACACACACATNAGACTGGCAACTGTTTTGTAGCAANAGCCATANGTAGCCTTACTA
CTTGGGCCCTTTCTAGGTTTGAATTATTTCTAAGCCTTTTGGGNATGATTAGAGNGAAA
ATGGCNCCNGCAAACCTTGNAGGGGCTTTTGGNNCCANAATGATTTTTAATAAAAAAAGG
GGATTGAATAGNTAAANTCAAGGGAANGGTTTATGNAAAGGAAAAAAAAAGCCTCCTTC
NTGGTTAATTTACAAAAGGTNTTTNTNGGGGGACCGNCTNTAAAGNACTNGGGNTTNC
CCCGCAAGGTGGGNNGGTATTNACCNTTTNNGGNTTNAAAAAAAAAANTTNGNNNGGT
NAACCCTGGAACNGGGGGGGTNGNG

Sequence 1353

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGCCGCGCAGGTCTTCGACCCACGC
GTCCCGGGGTTTCAAACCTGAATAACTCATTGTTGGGTCTGGATCTGTAAAAAGGTTTTGT
CACTGATGGGCAATATGGAGAGAATGTAAAAATATCTAAGTTCAAACAGAAAAAGAAAC
AACTGGATGAAAGCTATAAACAATAGTTCAGAAGATTGGCGTAGAGGATTTACCTACAGA
ACTTCAGGAGATTCTTAAGAAGGCCTTCAGTGATCTTTTCATCAATATCATCAGGCCTTA
TCATTGTTTACATTTGCTTCTTTACCATAGGGAATATAATAATTATTTACTGGTTAA
CTTCTAGGGAGATTGCCTGCGGCTTATTTAAGATCCAAATTTAAAGTAATAATTTCTG
TTGAAGCTGCTTGTGAGGTGGTTGGGTGGGCAGATAGAGTGAAGCCAGGGACACACACTA
AATGAGCCCGGGATGTAGGCAGGTTTTGATGTTTTGCTTGCTTTATCCCTAACATT

Sequence 1354

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGATTCTCTGATTAGATTTTAACTT
TTTTGATGAAATATTGAGTCTTAACTACTTTAAGATGCCATAACTGAATACAGTGCTA
AGCAAAATAAATATTGACTAGTTCTCATTCTATCTTTCAAATATTTCTAATGCTCCTCT
TTAAGCATGGGCTCAGGTATCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTACTT
ACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTCTGTAAGACGGGATTAAAG
TACCT

Sequence 1355

AGCTCCCCGCGGTGGCGGCCCGCCGGGCAGGTCTTCGACCCACGCGTCCGGGGTTTCAA
ACTGAATAACTCATTGTTGGGTCTGGATCTGTAAAAAGGTTTTGTCAGTGATGGGCAATA
TGGAGAGAATGTAAAAATATCTAAGTTCAAACAGAAAAAGAAACAACCTGGAATGAAAAG
CTATAAACAATAGTTCAGAAGATTGGCGTAGAGGATTTACCTACAGAACTTCAGGAGATT
CCTAAGAAGGCCTTCAGTGATCTTTTCATCAATATCATCAGGCCTTATCATTGTTTACA
TTTGCTTCTTTTACCATAGGGAATATAATAATTATTTACTGGTTAACTTCTAGGGAGA
TTGCCTGCGGCTTATTTAAGATCCAAATTTAAAGTAATAATTTCTGTTGAAGCTGCTTG
TGAGGTGGTTGGGTGGGCAGATAGAGTGAAGCCAGGGACACACACTAAATGAGCCCGGGA
TGAGGCAGGTTTTGATGGTTTGCTTGC

Sequence 1356

CGCCCGGGCAGGTACTATCTATAAAGGAGGTTTGATGTTTTCTTACTGTTTTGTAAAT
ATTTACGATTATCTTTAAAAAGTAAGGACATTGGCCGGGTGCGGTGGCTCATACCTGTA
ATCCAGCGCTTTGGGAGGCNGGTGGGTGGATCACCTGAGGCTAGATAGTTTTATTCAT
TGGCTGTTTACCAAAAAAAAAAAAAAAAAAAGTGCGGCCACCT

Sequence 1357

TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTGCGGTCCCGAGTGTTTCCA
CTCTGTCCATAAAATGGGAGCTAATATTCTCCAACCTGTGTGCCTGACATGATGGTTAAA
GGGATTAAACAAACAATAGTTTGTAATTTATTCTGTGAGCAAACTGCTGGTAAATAA
AAGGGCTAGTGACGAAAAATAAATTTAAAAACCTAATAAAACAAGTTTGAATTTATA

TABLE 1
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ATTGTATACAAATAAAAGATGTTACAAAAAAAAAAAAAAAAAAGGACCTGCCCGGGC
GGCCGGCCCGCCCGGGCAGGTTTTATTAAACATTCAAACCTTCATTAAGACATGTGCAATAT
GGCAATTTTACTGGGGATTAAACCCCTACCTAGGATTGCTTGCTGGGGCTTAGCAACAGGG
TCCAGTTCACACTTAGCACTAATTAATACTTTATTGAATAAATACAATACCAAACAAAA
TGCATTCAAA

Sequence 1358

CCGCGGTGGCGGCCGAGGTCAAGTTTCGACCCACGCGTCCGCATTATCCTTCTTGCCATC
TACCCCATGTTAAAGCCAGGCTGATTTGTTCTTGGATCTTAAGTGTGACAAAGCCTGCGG
GAAGGAACCACATTCTGAAGGTTTGTGGGCTGTGTGAGATCCAGAGAACCCAAGGGGGTT
TTTTTGCTCTTGACAAACGAATGTTAGGTATGACCTATGATGATACAACTTCTGCAAAAT
TGAGGACCAGCCTATTTCTTCATTAGAAATGCAGGAAACCTGCCCG

Sequence 1359

CGCGGTGGCGGCCGAGGTCAACGCTTCGACCCACGCGTCCGGGACCTCAGAATATAAAAA
TATGGTTTTTTTTTTCAGACTTACTAGTTTTTTTTTGATAATTCCTCTACGAATGTTGATT
AACTTAGAAATATGTAAATTTAATATTCAAACCAAATTATTTTTTAAAGAGGAAAAAAA
TATAAACCTGCCCGGGCGGCCGCGCACTTTTTTTTTTTTTTTTTTTTTTNAACCTT
AATAGNGTNCGGAAGNTGAATAATTTATGAAGGAGAGGGGTCAGGGTTGATTCTG

Sequence 1360

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTGAGTCGACCCAC
NCGNCCGGAGATGTATACTGCCACTATAGGAACTATAAGAAAAAGTCAAATGGAAATNTN
ATAAATAAAAAACCACAGTCACTATAATGAGGAAATACTTTGATANGGNGTCAGTGAACCTC
AAAAATNANTCAATNGAACTACTCAAACCTAAACCTCAAAGAGAAAAAAAANGATGGGAG
ATAATTATTTTTTAAGAATTGGTCATCAAATGTAGCAACAAGTTTCGCCTTATCCTATAT
CATTGAATTTTTCAAAAAATAAGCTCATTATACAATCTTTAAATATTTTGAATAGAACT
GTTTCATGTGTTATTNGTGAAAAAT

Sequence 1361

CCGGGCAGGTCTACTCAAGTAGTCTTTACCCCCTACTCAAGTAGGGGGTAAAGTGTAGAA
CAAGGAGTTTGATCTGTGTTCAACTGATTGTGAACCATCAATTGAGATAACTCACTACCT
TCAGGCCAGCCAGTTACATACTTTTGAAAAGCCAAGAGTGAAGCAGGGTTGTTTTTCATC
CAATTCCTGGTCTTTTTGTTAAAGGCAGCAATAAGATAGGGTGGTTTCGGGCAATCACTT
AGCTAATTGGCTCTCTATAGTCATACCTGGATAATATTTGTAGTCATACCTGGATAATAT
TTAAAGGAAGAACTAAACATAGTCCTTAAGTAGGAACAACCTACAATTTTAAC

Sequence 1362

ACTGTTTTTTTTTATTTGTTGAAGTTGTTGTTGTTATTTTCAGTCTTTTTCTTATTGGGTT
GACCAGACTTGGTAAATCTGTAAGAAAGTTCCATAATTATGGGGAAGATTTCTCTGAA
TTGGCTAAATTCCTGTAGCTGAAAAAAAAAAAAAAAAACCTGCCCGGGCGGCCGGCCGCC
GGGCAGGTTACAAGCTTCGACCCACGCGTCCGGGAAATTTTAATAAAAATAGGTGAACA
TTTTAAATGACCTAATACATATTTAGTCCACATTGAACTTTGGCATTGTTGNCATTGCCA
TTAAATTTTTGATGGCATTAAATTTTATGCCATTAAAAATTTTTGATCAGTAGGTCAG
CA

Sequence 1363

CCGCGGTGGCGGCCGAGGTACCACGGTTGTCCCCTGAAAGGTGTTGTGTCCCTCACCAGA
CTGGGAGCACCTCAAGGGCAGAACCCATGTCATGTTCCCTTTTGTATTTCCAGACCTGAA
ACTGCCAGTAAATAAACCCCTAAAAGTAGAAAGAAAAAAAAAAAAAAAAAAGTGCGGCCCG
CCGCACTTTTTTTTTTTTTTTTTTTNGGAAAACCAAACATGCTTTATTTTCATTTTTTTC
ACAATTTATTTAAACATCTCANATATACAAAATAGGTACCT

Sequence 1364

CCGGGCAGGTCAAGGAGTGTCCCAAAGATTTCCCAAGTCCAGCCCAGAGAAGCTGAAAGCC
TTTCCCCCAGGTGTGGGGCTGAGTTAGATGTGGGTCATAAAGGATGTGGCCTCGAGGCTG
GGAGGCAGCTGGGCAAAGTGGGAAGCCTCCCTACTCCTGAGACAGTGATGGCTCAAATCC
AGGCCAACCTGGAACATGATCCTCAACTTCTCTAAGTTCACCTTTCCAGGTGTGAAATG

TABLE 1

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GGTTGTTCTGGGAATTGAGTGAGCTAATGATACACTCCCTGGCACACAGCGAGCCTCAAA
ACGCTTGTTGCCCTCCCTACCTCACAGCCCATTTTAGAAGTTTGCTGTCACTTACTTTG
GAGTCAGCAAAAACATATTCCTTCGCGAGGATCTTCGGACGCGTGGGTGGAAGCTTGAC
CT

Sequence 1365

TACTATAGGGCGNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCC
GATTGATTAATACCTGTCACAGATACATTTTGGTTTACAAATCAATGAACAATGGAGGGA
ACTCTGTCTTAATCTTGGTACGAGACAATGAACCCAGGTACTTACCCAGACAACGAC
GCCGCTTNACCATGATGATGGACAACAGGCAACTTTTTTTTTGGAGTTTCAGCTTGCTTC
CAACAGGGACGGTGAGTGTGAGGTTTATCCCATTTCTAAGACGATAGAAGTTTTCAGCC
TAAGCCGTATTCTAGGTAAGCAGCTGGATTGCAGTTTTGTCTTGGAATNTCCTTAA
TTGNNTNANNCGTTAANATTAACAACTAGCTGGNTNTTAAATTTTTNTCNTTACCCAT
TANAGGTNCCCCANAAATTNAAAATNAAATTTNTGCAATTAATTTTGAACCTTGCCCC
GGGGTGGGCCCTGGCCCCCCTNGACAANGNTTTTTTTTTTTTTTTTTT

Sequence 1366

CTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGGGCAGGTCTTGAGTCG
ACCCACGCGTCCGGAGCTGCTCAATAGTGAGAATCAGGTGATATAATGCATGTGGAAAAA
GAATGTGAAAAATCTAACACTTTAGATTGTATACAGTGTTTTTTAAAAAGACACAAAAA
ACTGTCAACATGAGAAACATAAGCAAAGTTTACTCAAGACAAACATCCACGAGTCACAA
CTTCAGTTATTCCAGTCTTCAAATAACAGAAGGGCAAAGCAAAGGTAAACATGCAAA

Sequence 1367

GACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGATTCTCTGATTAGATTTT
AACTTTTTTGATGAAATATTGAGTCTTAATACTTTAAGATGCCATAATACTGAATACA
GTGCTAAGCAAAATAAATATTGACTAGTTCTCATTTCTATCTTCAAATATTTCTAATGC
TCCTCTTTTATAGCATGGGCTCAGGCATCAGATGGCGTAGGTCAAGATCTTGGCTCTACT
GTTTACTTACGGGAAATACTTTTATGTTGCTAAATCTCAGTTTTCTCTCTGTAAGACGG
GATTAAAGTACCT

Sequence 1368

CCGCGGTGGCGGCCGTTAAAGGAATAATCTGCAGAACATCTTGATTTACAAGGGACAAAA
TGATGCAAATTATGCTGTCCAACCTACTGGTGAAGTGGATCAGAATGGTCCAAGGACT
GTTAAACAGAGGAAGTATTTACATTCTGAAAACCTTGCGGACGCGTGGGTGGAAGCTTGT
CACCTCGGCCGAGGTACCTTCTGTCAAAAGACCCAAGCTTCTCCAGCTTCCAGGATAG
CAGTCAGCCAGCTGGAAAAGCCGAAGGGATCAGGGAGCCAAAGGTGACTGGGAAGCTAAA
GCAACAATCACCTAAATTACAGTCTCCAAGAAAGTTGCTTCTCAGGCAGAATGCCCC
TCCCAAGGGCACAGACACACAAACACCGGCTGTGTTATNCCCATCCAAGACTCAGGCCAC
CCTGAAACCTAAGGACCATCATCAGCCCCCTTGAANGGGCC

Sequence 1369

CCGGGCAGGTGAGCGGCCGCCCGGGCAGGTTTCTGCAATTTCTAATGAAGAAATAGGCT
GGTCTCAATTTTGAGAAGTTGTATCATCATAGGTCATACCTAACATTCGTTTGTCAAG
AGCAAAAAAACCCCTTGGGTTCTCTGGATCTCACACAGCCCACAAACCTTCAAGATGTG
GTTCTTCCCGCAGGCTTTGTCACTTAAGATCCAAGAACAAATCAGCCTGGCTTTAAC
ATGGGGTAGATGGCAAGAAGGATAATGCGGACGCGTGGGTGGAACCTTGACCTN

Sequence 1370

CCGCGGTGGCGGCCGCCCGGGCAGGTGTGACCCACGCGTCCGACGACTCACTATAGGGA
TCTAGATCACGAGCGGCCGCCGCCCGGGCAGGTACAGAGATTTAAATGAAATCTTCGAA
AGAATAAATTTGCTTTTCAGTCCACTGTATTTCAAATTT

Sequence 1371

CCGCGGTGGCGGCCGAGGTACTTCAAAGTTATTGCACATACACTTGTTTACTTTGTATGT
TTTGCAGGATTAACCTTTGTATAATCTTTTACAAAATTTTTTTTTCAGTATGCAAGCTT
GCAAGATGAAAATAAACCTGTTTGCCTGATAAAAAAAAAAAAAAAAAAAGTGCGG
CCGGCCGCCCGGGCAGGTCTTGAGTCGACCCACGCGTCCGCCGGAGAnnnnnnnnnnnnn

[illegible]

CCGCGGTGGCGGCCCGCCGGGCAGGTTATAGACAATATGCTCCTTAAGGTCCCTTTCA
CCCGTTCTATGGATCTGTGTAGTTTCGCTTCTTTTTCAATATGCTCAGAATTAGGACAC
CAATGTTAATGGAAGATAAGGAACTATACCACCTATCCCTTATAGAAGATTTGTGCACT
AACTAATATGAGCCCTGGAAGATCAAGCCAGTAGAAGATAGAAGATCTATCCCTGCTTTA
TACTTTGGATCATTTATTTGTGAAGATCACAACTTTCAAAGTTTTATTATTTCTTAGGTC
TTCATGGAAGTTCGGGGAAATTAAGTGGATCTACTTCTAGTCTAAATAAGCTCAGTGTT
AGAGTTCAGGGAATCGCAGATCTCAGTCATCTCCCTGTTGGATATGG

TACTTAGGGCGCAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGAAGAAGTGCTATGTGGCGAGAAAAAAAAGTTTTAATGTATTGGAGAAGTTTTAAAA
AACCCAGAAAAATGCCTTTTTTTTTTTTTTTGAACATAAACTCAAGATTTTATTGTCTTC
ATAATAAAAGATGACACTTAGAACTGGATCACTTGGCCCTTCTCTTCTTATCTCCTCCCA
GTTCAAAATGCTTGCATNTTTAATAGCCAGCATTNTTTAANATCTGCAGGTNGGGCTT
AAACNCCNCTTAAAGCCTTAAACACAAATTTTTTTTTTGGNGGNTTTAAGCCCTTTTT
TCCCGGAAAAAANTCGGNTTTNAATTTTGGNCCNANAAAAANNACCCCTTTTGTTTTTTTT
NNNAANAAAAACCNCNTTTTTNTNTNNGGGGGGAACNTGTCCCGGGGGGGGGGNCGT
TTTAAAAAAAAGGGGGNCCCCCCCCGGCNGNGGGGGATTTTTTTTNTAAANNTTTTT
TTNNNCCCCCCCCCCC

CCGCGGTGGCGGCCGAGGTACTTCAAAGTTATTGCACATACACTTGTTTACTTTGTATGT
TTTGCAGGATTAACCTTTGTATAATCTTTTACAAAATTTTTTTTTCAGTATGCAAGCTT
GCAAGATGAAAATAAACCTGTTTGCCTGATTAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GTGCGGCCTCGAGCGGCCGCCGGGCAGGTACTCTATAAGAGGTGTGGGTGCTTGTTTG
GTCAGGATGTTAGAAAGTGCTGATAAGTNNCATGATCAGTGATNCCAAAAGGTTTTTAG
GAAGTATGGCAAAANTGTTGTATTGGCTTTATGGGGACATGATNNTAGTCNNCTTCCT
TTTTAAANANGNNTTATNTTGTTNANTGGNTTAANTGGTTTTTAAAAA

TACGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGAC
CCACGCGTCCGGCCACATTTTCAATTTAGCCATTTTCTCTTATTCACCTTTTTCTGCTA
ATTACTCTGTAATTCCACTAAGAAAAAGTCAATAGATAATTCCAATAATGACTTCACTCCT
GAGAATTTTATTAGCTGCTAACGCTTGTCTCATCATAAGCACTCATATGTTCAATTGAGTA
AATATTTATTGAGTATTTGCTATGGTCCAGGCACTGTGCTAAGTATTGAGGATAAAATGG
TGATTGAAACATTTTCCCTTCTTGATTTTAACATCTACAAAATAAAA

CCGCGGTGGCGGCCCGGGCAGGTAATCACACAACACTTTCTTTTCCAACTGCTGCAA

TABLE 1
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AGTGCATCTACAATATGCTATTACAGATCCACTTTTAAAAGGTTTCCTGTGACATTACAG
CAAGCCTCTTTTTCAAACAGAGGAATAATCCCAAATTCCTCCTCAAATAAACTCCATTC
CAGTAAATGGTAAATACATAAAAAATTACAGTAAGCCAGACACTTAAAAGGACAGCCAAG
AAGTCTTCCAACAGTTTATTAGAAAGAATGTAGACATTTAAAAAAATCCCCACTGTCATG
AACATAAATTGAGGTTTTAGCCCGGGTATAAGCTGAATCAAAAAAGGAAATAAAAAAT
CCAATAGTGTATTAAACATTTTCACTCATTGCCATACTGACAGTGCAAATCAAATCTG
GACTAA

Sequence 1378

CCACTGGATTGACTCAGAGAGGACCCCCAGAGGGTGTCTCCATCTTCCCTATTTATTTT
CAGCCCTTGAGGGCTTCATTGTAGATCAAAGCCAAGGCCCCAGGAAGGNGACATACTCC
TGGAAGTTCACCTCCTGGTCTTGTCCGGTCCAAGTCTTCCATCAGCCTTGCAATTTCA
GCATCCTGCAGCTTCNAGCCAATGGTGAGCTCCTTCTGGATCAGCTCCTTCAGCTCCTTC
TTGCTCAGGGTGTGCTTGTCAACCTCCCTGCCGGAGATACCTGCCCG

Sequence 1379

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCAGGGATGGGAGG
CACAAAGTTGTGATTGGGCAAAGTTTATTTTCTATGTCAGCCTGTCAGTCCACTGCCCAT
TTTGCAAGACTTTTTTTTAGCCTTGACAAAATGTCTCAGTTAAGTATAAAAGTTTTTCCA
CTACTTAGTCCAAAAAACTATTAAATCTTAATGAAATAGCCACTCTCAAAAAAA
AAAAAAAGAGTGCGGCCGGCCGCCGGGCAGGTCTTCGACCCACGCGTCCGTCTTTTTTC
TTCCCAAACATAGACTTGCAAGACATGGCCTGTATGAGAAGAAAAGACCTNAAGAAAGC
AACGAAAGGAACGCAAGAACAGAATGAAGAAAGTCAGGGGGA

Sequence 1380

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATAGCACATTACAGTCAAA
TCCCTTCTCGCCCCCATGGATGACCCCCCTCAGATAGGGGTCCCTTGACCACCATCCTCC
GTGAAATCAATATCCCGCACAGAGTGCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAGTGCGGCCTNGAGCGGCCGCCGGGCAGGTACATNTATTTTGGATTGTATATTGNG
TTTGTGATTTACGCTTTGATTCATAGTAACCTNTTATGGAATTGATTTGCATTGAACAC
AAACTGTAAATAAAAAGAA

Sequence 1381

CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATCTGTCAA
ATATACTATGAAATGCATAGTCTCCACTTAAATGCTGAATGACACACAGTTTTGCAAG
CATTACTGCTTTCCACAAAACTGCTGAATAGGAGTCCGTCCCTGCCAAGATCAGTGTT
TAAGAGATACTTTATGATGCTGATAAGTATTATTGGTGGTGGTGGTGGTTCAGAAAGTTTG
TCACTCATGCAGATGTCTGAAATCTTGTCCGAATCCATGGAACATAGGGTGGAGGCCAG
CTCCCCCTTTTTTAGATGATCACATAGTTCTGAGCAGAGATGTGGTCCTCACCCTGCAG
TTCTGCAGGAGCTGCTGCTGCTGGGATGGCTGCTGG

Sequence 1382

CCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCG
TCCGATTTTTTAAAGTATTTTCTAGTCTTTTCTCTCTGTGGAATGGTGAAAGAGAGA
TGCCGTGTTTTGAAAGTAAGATGATGAAATGAATTTTAAATCAAGAAACATTAGAAAC
ATAGGAATTAACCTTAGAGAAATGATCTAATTTCCCTGTTACACAACTTTACACTTT
AATCTGATGATTGGATATTTTATTTTAGTGAACATCATCTTGTTAGCTAACTTTAAAAA
ATGGATGTAGAATGATTAAGGTTGGTATGATTTTTTTTAAATGTATCAGTTTGAACCTA
GAATATTGAATTAATGCTGTCTCAGTATTTTAAAAGCAAAAAGGAATGGAGGAAAAT
TGCATCTTAGACCATTTTTATATGCAGTGTACCTGCC

Sequence 1383

CGAGGGAGTCTATTGGAGCCCTTGGGAACTTCTGGATCAAATTGGACCTGAATTGAGATC
TATTTCTCAGCTTCACTTATGTGAGCCAATAAATTCCTTTTTTGTGGAAGGCAAAAAA
AAAAAAAAAAAAAAAAAAGT

Sequence 1384

TACTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTT

TABLE 1
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TTTAAACGTTTTAATTAATGGATTTATTTAAAAAGACTATAAAATCTGACATCAAGAGA
GATAAAAAAAAAAGACCCATAAGATTTAAATTGACAAATGTAAATGATTGGCTACAATG
TAAAAATACATTTNCCAGCCCCCAAACAAAACACAAGTATAGTAATTATAAAATTTTTGG
ACCTGCCCCG

Sequence 1385

AGGTCCTAGCTTGAGTCGACCCACGCGTCCGGCCGCTGTTCTGATTTCTTATTCTACAAC
AAGGGTCAGCCTACAGGCAAAACACATCCCATTGTCATTTTTTGTAAATAAAGGTTGTA
TTNGGAACATGGCCACTCTCATTTGTTTTCTATTATTTATGGCTGCTTTCACCTACAACC
TGAGTGGTTGCCACAGAACTGTATGGCCTGCAAAGTCTAAAATATTTACTATGTAGCTT
TTCTTTTC

Sequence 1386

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTC
CGAGAAGAGTTTGCAATGCAACAAAATATTTAATTACCGGTTGTAAAAGTGGTTAGC
ACAATTTATATTTCCCTCTCTTGCCCTTCTTAATTTGCAATAAAAGGTATTGAGCCATT
TTTTAAATGACATTTTGA

Sequence 1387

CTACTATAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCACTTTTTTTTTTTTTTTTT
TTTTTTTTTGCTTCAACAAAAAGGAATTTATTGGCTCACATAAGTGAAAGCTGAGAAA
TAGATCTCAATTCAGGTCCAATTTGATCCANAAGTTCCAAGGGCTCCAATAGACTCCCT
NTCACCTGGTACCTGCCCCG

Sequence 1388

TAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCAAGCTTCGACCCACGCGTCCGG
GGAGGACCTAGGCAACGGCCTGAGACTCCGAGACTCTATGTTGAAGATGCCTGGACTAAC
CTACTGAAGATACCGTGGTTTTACCAACAGCCAGCACCATAAGGAAGATATGAATGAAGC
CATCTGAGACCAGCCATCTGGCAGCCAACTGCCAACTGACTGCAAATGCATGAATGATC
CCACTGACACCACGTAGAGCACAAATGAGTTGCCTCCACTGAGCCCAGCCCAAATTGTTA
TCCTATAAAATCATAAAAACATAAACAGTTGTTTTAAGTCAAAAAAAAAAAAAAAAAAAAA
ATTAAGTGCGACCTGCCCGNCGGCCGCGGCCGCGGCGGCGGAGGTACCCATTAATTTGCTCA
GATATAGCAGGCTTAATGGTTCTATATTTTCAAAGTTTTTAAGAATGGTT

Sequence 1389

TTAGGGCGATTGGAGCTCCCCGCGGTGGCGGCCGCGGCGGCGAGGTACAAATAAGCCACC
CCACTAGGAAGTATGTTAAAAAAATTCAAGAAAGATTAAAGGGAGATTACAGTGTTA
CTGTGACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGG
GTTGGCCATNANAAGGAAGCCTGGACAGGTCCCTTGTTCAAAGGTATGACACAAGGTAA
CCCNAAAGCCAAGGCACCCAGACCAAGTTTNCATACATAGAAAGTTACAGCTGCTTTTATA
CCCCCTTGCCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAG
GAAAGACCAGTAGAGAGAAAAAAGGCCATCTATACCAATTNTAAGTTAATTTAGACTAA
ACAAGGTCTTAATAGCAAAGGATAATTGAAATCCCAAAGTTACAAGGTTTTTTAAC

Sequence 1390

CCGCGGTGGCGGCCGAGGTCTTCGACCCACGCGTCCGGGTTTCATGAATGGAAACCTAAG
TAAAGTAAAGCTCATTAGTGACAGACTTGTTTTCTTCTTGTTATTCCTCCAGCAACTCCC
TCACCACCACGCCTCCCTGCCTACCATCCCCGGAAGGGTGCTTATCTTTAACAAAGAGA
ATCTAAAAAAGAGTGGCGCCGCGGCCGCGGCGGCGAGGTGAGAAAACAGACCATATT
TACTACATAATTCGCCTTCTACCTTTACCTGCTTATGTAATAATTTAACTGTAGAG
GGGACATGGAGGTGACCGGAGTATTTAGTGGGTTCCTTGCTCCTGGGCTGGGCAGGTTCA
CAGGCCCCACAGGCCTTGGGCCCCAGCATC

Sequence 1391

CCGCGGTGGCGGCCGAGGTACTCTGAGGTACGTCAAACTATGCTTTAGAACCTTCATCT
TTTGCTTTCTTGGGCTTTACTTTCCAAAATGGACTACAGGATAATGAGGCTTTTTTAA
AAAAAAAAAAAAAAAAAAAAAAAAAAGT

Sequence 1392

TABLE 1

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CCGCGGTGGCGGCCGCACCTGCCCGGGCGGCCGCTCGAGGCCGCACTTTTTTTTTTTTTT
TTTTTTTTTTTTAAAAATTCAAAAATTAGTTTATTAGCTTAATATAATTAGGTCAATGG
AATCCTGTTTTGATCTCAATACTTCCCATATTGCAATATATAAATGNGACAAATTCAGCT
GTTTTGTGGCATAAATAAGTGTCTAAGCTGGGCAGTTAGTCTACCC

Sequence 1393

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCTTTTTTTTTTTTTTCT
TTTGAAACAATTTTTCTGAAATTTATTTCTAAAAGTCAGAGACAAAACCTTTAGGAGTGAC
ACATTTATACTAAGCATACATGCGTGAGCAAAAAAATAAGCACAGAATACAAAAATGA
AATAGTAAATTTTAATACAGTATTCTGAATACAAGTAGAATACCACTAGATAAGAATTG
TATTTACCTAAGAAATCTATGATAGNGNGGGNGGAGATAAACCAGTTTAGGATAGCCACT
TCACTATTCACATTTTAATCAGTGCTGACCAGAAGCTAAAGCAA

Sequence 1394

ACTTAGGGCGATTGGAGCTCCCCGCGNGGGCGGCCGNGGTACAAATAAGCCACCCCCACT
AGGAACTATGTTAAAAAAAATTCAAGAAAGAATTTAAGGGAGATTACAGTGTTACTGTG
ACACCAGGAAAACTTAGAACTTTGTGTGAAATAGACTGGCCAGCATTAGAGGTGGGTGG
CCATCAGAAGGAAGCCTGNACAGGTCCCTTGTTTCAAAGGTATGACACANGGTAACCCGT
ANGCCAAGGCACCCAGACCAGTTTCCATACATAGAAAGNTACAGCTGCTTTTATACCCCC
TTGCCCCGCCAACGTAGTTAAGAGAACAGCAGCATAAGCGGCTGGCAGAGGCAAGGAAAG
ACCAGTNGAGAGAAAAAAAAGGCCATCTATACCAATTCTAAGTTAATTTAGACTAAACA
A

Sequence 1395

CCGGGCAGGTACAAAAGGGTTCCTCTATATGCCAACTAATCCAAATTTTACTTTTACT
GCAAAAAAACCTTTTTGGCATCAAAACTCCATTGTTTCTCTGCACTCTGACACCATCATT
TCAAAGGGGCTCACATAAATGATCACTACTGCTCTCCCTAATTTTTGAAAAAGGAGTT
TTGAGATAAAACAGTGCTTTTATTATTAGCCAACACAAAGTGTGAGAAAATCATTCTG
AGAATTAACATTTTAAGCTAACAGAAATTCAGTATACTTAAACATAATTATATTTAATG
AGTCATTATTTGGATCTAAAACGGACGCGTGGGTGCAAGACCTCGGCCGCTCTAGAA

Sequence 1396

CCGGGCAGGTACCAGTTTGAGTTGAAACGGTATGTGACTTCCCCAGCTGCGCCCTGGGCA
GTGACTGCATGCATCACTGAGAGGTCTGTCTACAGCAGATAAACTCCACAGATCACTC
CTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCCAGTGCAATTGAGGCTGGA
AGCAGGAGCAGAGACTCTGGGATATAGTGCGAAAGTCTTTCCCCTGTAGTTGGGCTAA
TCTGGAAAAACTCAAAAACCTGGCCTGATTACCGAGGTTTCTTTATGGATATTTAGTAT
TTAGATAAAATTTTTACAGTATTCTTGAAATGAACCAATTAACACATAGT

Sequence 1397

AGGTACTTTAATCCCGTCTTACAGAAGAGAAAACTGAGATTTAGCAACATAAAAGTATTT
CCCGTAAGTAAACAGTAGAGCCAAGATCTTGACCTACGCCATCTGATACCTGAGCCCATG
CTATAAAAGAGGAGCATTAGAAATATTTGAAAGATAGAAATGAGAACTAGTCAATATTTA
TTTTGCTTAGCACTGTATTCAGTATTATGGCATCTTAAAGTAGTTAAGACTCAATATTTCT
ATCAAAAAAGTTTAAAAATCTAATCAGAGAAT

Sequence 1398

AGGTTTGAGTCGACCCACGCGTCCGGATTGATAGCTCTTCTCGATTCCGTGGGTGGTGG
TGCATGGCCGTTCTTAGTTGGTGGAGCGATTGTCTGGTTAATTCGATAACGAACGAGA
CTCTGGCATGCTAACTAGTTACGCGGACCTGCCCGGGCGGCCGCGCCCGGGCAGGTGC
AAGATTCCTGATCGGTATACAGTGATGTATTTACTAAACAGAGACCTGTGCAGAAATTAC
ATACTATCCATCTAGATAGGTTGTTACACTTTTGCCTATTGATGGAATAGTTCCATTTAT
CAAGTTTATACATCAAAAAGCTTTTGAAGTTCACCAGACTGTCCAT

Sequence 1399

CCGGGCAGGTACTGTAAATCTACTGTAATCCTGTTTTGCAGAATACTGCACGACGGAGAT
TGAGAAGTGAGAGCTCTTATGACATAGATAACATTGTGATTCCCATGTCATTAGTAGCCC
CAGCTAAATTTAGAGAACTCCAATATAAGGGAAATACTTACTCCCAGGGTATGGTATAC

TABLE 1

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TTTACCATCTTCATANTTTTTCTTTCCCTTCCCTTCCCTTAAAAAACTNAANTTTTTTC
NAAGGTGGAAGAANTTTTTAATTNAANTGGAAAGGGANGCTTCCCTTCTTCCCCAGTTCC
CTTCTTAGCCNATGGGAGGGGGAAACCGGG

Sequence 1400

CCGCGGTGGCGGCCGATTCTCTGATTAGATTTTAACTTTTTTGATGAAATATTGAGTCT
TAACTACTTTAAGATGCCATAATACTGAATACAGTGCTAAGCAAATAAATATTGACTAG
TTCTCATTTCTATCTTTCAAATATTTCTAATGCTCCTCTTTATAGCATGGGCTCAGGTA
TCAGATGGCGTAGGTCAAGATCTTGGCTCTACTGTTTACTTACGGGAAATACTTTATGT
TGCTAAATCTCAGNTTCTCTTCTGTAAGACGGGATTAAAGTACCT

Sequence 1401

CCGGGCAGGTACCAGTTTGAGTTGAAACGGTATGTGACTTCCCCAGCTGCACCCTGGGCA
GNGACTGCATGCATCACTGAGAGGTCCTGTCTACAGCAGATAAACTCCACAGATCACTC
CTCCTGTAATCCCTCTAAGTGCTCCAAGGCAGCAGAAAGGCCAGTGCAATTGAGGCTGGA
AGCAGGAGCAGAGACTCTGGGATATAGNGCGAAAGTCTCTTCCCCTGTAGTTGGGCTAA
TCTGGAAAACTCAAAAACCTGGCCTGATTACCGAGGTTTCTTTATGGATATTTAGTAT
TTAGATAAAATNTTACAGTATTCTTGAAATA

Sequence 1402

AGGTACTCCCATTTCCCTGAAACAAGCAGCCAGCAACTATCTCAGAAATGTGTCAATTTT
ACTGGTTATAATTCTTAAAAAGCTTGTTTTCTAAGATATGAAATGCCTGCCAGTATACA
AACTGCTGTAATACTTCCCTTTTTGCTTTTAGCGGGGAAAAAATAGCTTAATGACAGCA
TAGAATCATGTAGTAAATATAATTCATTTTTTGAAGGTTTCACTATATCCTCTTCCATT
TGTTTATTTTAAATGATCTAATTGCAAACATGTCATCACTCCCTTGATGTTTACCTNCT
GTTATGCATTTTTAGCAGGCTTTATTGTCACC

Sequence 1403

AGGTCCTAGCTTGAGTCGACCCACGCGTCCGATTTTTGCCTCCAGACTACAGATCAGAAA
ACTGAGACTCAGAATGTTTCAATTCCTTGTTTAAAGATCACAAAAGTGTGAGGTATAA
TGGAAGTGAIAAAAAAAAAAAAAAAAAAGTGCGGCCGCGCACTTTTTTTTTTTTTTTT
CAATATTATTTATCAAAATAAATTTATTAAGAGTATTCAAAGACCACTTCAAAGNGTAGC
TGCCTTCAAGACAGATTTTTGGCACTCATAACGGACACTGCAGTTTTCAACACCATAGCA
CTCATTCTATTTACACATCATTTTTAACA

Sequence 1404

AGGTGTTAGTTACCACTTCATTACTGGAGGGCACTGTCACAACTTCTGACTATCCAGAC
TTGAAGCTGGAAGCAAATACAAGTCTGAGGGGCTTAAGCTGGGAGGTTCTGGCCTCTCC
CTAGCTCTCTATGGCTCTACCTCTCTGCTTGAAGCTCCCTGCACTGCACTCCCATTACTC
TGACTGGGGATAGGACCACTGCTGACAGGGCCCCACCTTCAACTTCTTTCATTGCTCCTC
TTTTCAGGAAATCCCCACCCTGGGGATACTTCAAAGACCT

Sequence 1405

AGGTGATTGAGCAGGTCTGGGGTGGGACTGAGAGCTTGCATCTCTAACAAGCTCCCAGCG
AGGCTGATCCTGTTGCTCCAGGGACCACTTGAAGCACTGGTTGGGCATTGATGAG
GTCAACCAGGAGAAGCAGTGTCCCTAGAACTGGCAGGAGAGAAAGGACAAGGCTAAGAA
ACAGTGAACAGGAGTCAAGTAAATGCAGCTGCCAACAGGCGGGGGTCTTGAGTTCACAT
TCTTGGTCCAGGTGACGTTTCTGGGAGTCAACAACCTTCTCCTATGAAAAAGAAAAG
GGCCAGACACAGTGGCACACGGCTGTAACC

Sequence 1406

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGTCCCTAAATATTTAAC
TGTTACTTGTAACTTGTGTAATTTATTATTTATTTAATCAAAATTCTGAATATTTTAT
TTAAATGAAAGTTGCAAAAAAAAAAAAAAAAAAGTGCGGCCCGGCCCGGGCAGGT
ACATACCTCCTTGACAAATGGAGGGGAATTCATTTTCATCACTGGGAGTGTCTTAGTG
TATAAAAACCATGCTGGTATATGGCTTCAAGTTGTAATAAGTGAAGTGAAGTAAAGAA
AATAGGGGATGGTCCAGGATCTCCACTGATAAGACTGTTTTTAAGTAACTTTAAGGAC

Sequence 1407

TABLE 1
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AGGTACTCAATCTAATCCAAAATTTTCTTTCTTAGCAATCTATTTTCTGTATTAGAAAA
ATGTTTTTTTATTTCAAAGAGCCTCTCAAAGAGCATTTTACGTATCTTTTACTGTTTTCT
CTCCACCTCCAAGGGGTCTGTCTAGATCAGTGCGGACGCGTGGGTCGAAGACCTGCCCGG
GCGGCCGCGCCCGGGCAGGTACTGAGGACAAATCAGTTCTCTGTGACCAGACATGAGA
AGGTTGCCAATGGGCTGTTGGGCGACCAAGGCCTTCCCGGAGTCTTCGTCCTCTATGAGC
TCTCGCCCATGATGGTGAAGCTGACGGAGAAGCACAGGTCCTTCACCCACTT

Sequence 1408

AGGTACATATCACACATTTCCAAATTTGAGACCACTAATGTTTTTAATTTCAAATATGT
ATATAAATATGTATTCTTATTTCCAATTATTTCTTGGCATGAATTCCTAGAAATTGATC
TATTTAGTATAAGTGCTTTTTTAGCTATATGTCCACTAGTATGGTATGAGAATGCCCTGT
TTATGCCAGTATTATCATCATTGAATATATTACTGCTGATGTTGTGGTAATACATTTAAA
CCAATGTGATGGGGCAAAAAAATTATATTTTACTTACATCTTTAAAATTACTGGNGATC
TCTGNTATTGACAAGCTGGGCATANAAAAAGTAAATTAATAGAATT

Sequence 1409

CCGGGCAGGTGCGGACGCGTGGGTCGAAGCTTGTACAAAAACCCAAGTATCACCTGAATTA
CAATTATCTTAAATTTGTCCTTAAATAGCTTACTCTTGGAAGATTTGTTTCTATGTAG
ACATTATGGTAAAAGTTACTCTGAAACTCTTTCTTTAGTTATCTGTTTATTCTGAGCTC
AACAAGATTGAAGTAAGTTTTCGGGAGCTACAGAAATTAATCAAGAAAAGAATAATAGA
GGATTATATTCAATTGAAGTGCTGGAGCTCTTCTGATATTATCAATTCTCCTTCATAGAC
ATTTTATAAGCTCTTTTATGTGAACTCTTGCTTCATCCAGGCAAG

Sequence 1410

AGGTCTTCGACCCACGCGTCCGTTTTAGATCCAAATAATGACTCATTAAATATAATTATG
TTTTAAGTATACTGAATTTCTGTTAGCTTAAATGTTAATTCTCAGGAATGATTTTCTCA
CACTTTGTGTTGGCTAATAATAAAGCACTGTTTTATTCTCAAACTCCTTTTTCAAAAA
TTAGGGAGAGAGCAGTAGTGATCATTTTATGTGAGCCCTTTGAAATGATGGTGTCAGAG
NGCAGAGAANCAATGGGAGTTTTGATGCCAAAAGGTTTTTTTTGCAGTNAAAGTAAAAA
TTTGAATTAGTTGGCATTATAGAGGAACCCCTTTTTGTACCTGGCCCGGGCGGCC

Sequence 1411

AGGTGATTTCAGCAGGTCTGGGGTGGGACTGAGAGCTTGCATCTCTAACAAGCTCCCAGCG
AGGCTGATCCTGTTGCTCCAGGGACCACACCTTGAGAACCCTGGTTGGGCATTGATGAG
GTCAACCAGGAGAAGCAGTGTCCCTAGAACTGGCAGGAGAGAAAGGACAAGGCTAAGAA
ACAGTGAACAGGAGTCAAGTAAATGCAGCTGCCAACAGGCGGGGGTCTTGAGTTCACAT
TCTTGGTTCCAGGTGACGTTTCCTGGGAGTCAACAACCCTTCTCCTATGAAAAAGAAA

Sequence 1412

CCGGGCAGGTGCCTAATATATTTACTCTCTGGTCCTTTACAGGAAAAGTTTGCCAACCTC
TGGCTTAGATGATCACCTGAGGCCAAGGAGCCTCGCCCTTGAGCACAAGACTATGTAGTC
AGTAAAGCACAAACAAAATTGGGGCTTTCCCTAGCAAGGTTGAAAAGCGGAGAAGAAAT
GGATTTGGATAGGTAGTCAACAATGTCTGTTTTATGTTACCACACATTTTCTCGAGAAAT
TTCAATCAGCTCTCTGAGAACAGATTTCATCTTTAAATGAATGTTTCATAGGTAACAGCAAC
TCATGCATCAATGTTGCAAAGTGAGCTCATTTTACATTGCTTCAG

Sequence 1413

AGGTCAAGCTTCGNTCCACGCGTCCGGGAAAAACGGGGTACTAGTAGCCGCCCATAGCC
TGCAACCTTTGCACTCCACTGTGCAATGCTGGCCCTGCACGCTGGGGGCTGTTNGCCCT
GGCCCCCTTTGGTTCCTGGCCCTTAANAACAGGCNGGTTTTATTAAACCCCAANNNN
CCCGGNTTANAAGGGGAATTNAAAAAGGGCCCCGGCTTTNGNAAAAAAAAA

Sequence 1414

NCNGNCCAGGTCTACTCAAGTAGTCTTTACCCCTACTCAAGTAGGGGGTAAAGNGTAGA
ACANGGAGTTTTGATCTGTGTTCAACATGATTGCGAACCATCAATTGAGATAACTCACTA
CCTTCAGGCCAGCCAGNTACATACTTTGAAAAGCCAAGAGTGAAGCANGGTTGATNTTC
ATCCAATTCTTGNNCTTTTTGTTAAAGGCANNAATAAGANAGGGTGGNTNCGGGCAATCA
CTTAGCTAA

TABLE 1

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Sequence 1415

AGGTCTTCGACCCACGCGTCCGTTTTAGATCCAAATAATGACTCATTAAATATAATTATG
TTTTAAGTATACTGAATTTCTGTTAGCTTAAATGTTAATTCTCAGGAATGATTTTCTCA
CACTTTGTGTTGGCTAATAATAAAAGCACTGTTTTATTCTCAAACTCCTTTTTCAAAAA
TTAGGGAGAGAGCAGTAGTGATCATTTATGTGAGCCCCCTTGAAATGATGGTGTGAGAGT
GCAGAGAAACAATGGAGTTTTGATGCCAAAAAGGTTTTTTGCAGTAAAAGTAAAAATTT
GGAATTAGTTGGCATATAGAGGAACCCCTTTGTACCTGCCCGGGCGG

Sequence 1416

AGGTGTACAAGCTTCGACCCACGCGTCCGGGATGAGTTTGTATGTGTAAAGTGCTTGAAA
CAGTGCCTGCCACATACTAAGTGTGGATAAGTGTGTTATTAAAAAAGGCTGCTGAAA
AAGTGCNCGCCGCGCCGCGGGCAGGTGAGTGCAGATGATTGCAGAATTTATGTGATTACTGGGT
ACTCTAATGGTAAGGAGAAATTAAGACCAGCTAGTTGTTAATCTTAACCTTTAGTCATTA
AGGAGAATTTCCAAGACAAAAGTGAATCCAGCTGCTTACCTAGGAATACGGCTTAGGCT
GAAAACCTCTATCGTCTTAGAAATGGGA

Sequence 1417

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAGTAATCCTGTGAGAAAG
ACAGGACAGAAAACCACTGTGCCTATTTTACAGATACGAAAAGTGGGCACAGGTAAAGGG
GCTTGTCTGTAGTCCCAGCTAGCAGATGGCTGGAGCCAAGACTGAGGCTCGTTCTTCA
ATGCTGAGCCAGGGCTCCTTCCGCTGCACCACAAGAAGCTAGACCACTCGCCACCAGCC
TTCTCATTCCCTCTTCTCCATTCTAATCATTTCTAGCTGGCTGGCCTCCACAGAGCATA
GGAAAACAGCCAGGGCCGCGGCACGGTGGCTCATGCCTGTAATCTCAACACTCTGGGAGGC
CGAGCCGGGTGGATCACCTGAGGTGAGGAATTCGAGACCAGCCTGGCCAACATGTTAAAA
CCCCATCTCTACTAAAAATATAAAATTAGCCAGGCATGGTGGCGCACACCTGTAATCCC
AGCTACTCAAGAGGCTGAGGCAGGAGAATTGCTTAAATCTGGGAGGCGGAAGTT

Sequence 1418

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCCGGNCCGAGGNNCAAAAGAGAGACAAAAGG
GTTCTCTTGAAACAAGAAGAGTGACTCCAGATGTGGCCTGAATAATTGCCATGTTAAGT
TAATGCAAAAGATCAGAACAGGGCTACATTTGCACAGGCAGTTTCTCTCCGGGCGGTAGT
TTTCACTGATGATCACCTTTCACAGCATTTTCCCCAACCCAGCATTTCACTTAGTCTTCTC
TATACCCAGCACCTCCCCCGGCACCCCCGGCAAGCCCACTATCACTTCCGACTTCCAACG
TGGCATCCGTGAGATCTGTCCACATTAGGCGAAGCAGGAGAACACTGAGAGCAGCAGGAT
GGGTTTGAAAGAGCATGCCTCTGAAACACAGCTTCTGGAATTACATGAGGCCAGT
CCTACAGAGAGCAAGATGCACCCAGGATTTCTTCATTTTCTAATAGATGTGGGAGTGCT
CCATTTTCCCCGACAGCGAATTTCCCCTGAGAAACGATACTAGACCCTGGGTTTGCCAC
CTTGTAACCTTCTCTTATCTNCTCCTTTTCATCCCTAATTCA

Sequence 1419

CCGCGGTGGCGGCCGCGGGCAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGT
CACCACACTCTACAGAGGCAGTCACTACATGACACATTCCGCTTCTGCCTGGTCACCAA
CTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCC
CAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGG
CTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACC
AACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTCAACATCACCACCTACCATA
TTCCAGGACAAAGCCCAGCCAGGCACCACTTACCAGAGGAACAAAAGGAATATTGA
GGATGCGCTCAACCAACTCTCCGAAACAGCAGCATCAAGAGTTATT

Sequence 1420

CCGCGGTGGCGGCCGAGGTACACTGTAAATAGCCTTTACCAAACGTGTTTGACAAGGACC
ATAATTAACATCACTTAGTGAATTGTGATAAAGAAAAAAGCCATGATTTATTCGATGT
GATTGGCTTGTGTTTATGTGGCGCCAAGAACGAACCTGTTTAGCAGCTGTAACCAATGGT
ACGCGGGGGAGGCGAACAATGGCGGAGCTGGGCGAAGCCGATGAAGCGGAGTTGCAGCGC
CTGGTGGCCGCCGAGCAGCAGAAGGCGCAGTTTACTGCACAGGTGCATCACTTCATGGAG
TTATGTTGGGATAAATGTGTGGAGAAGCCAGGGAATCGCCTAGACTCTCGCACTGAAAAAT

TABLE 1
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TGTCTCTCCAGCTGTGTAGACCGCTTCATTGACACCACTCTTGCCATCACCAGTCGGTTT
GCCCAGATTGTACCTGCCCCGCGCTCTAGAACTA

Sequence 1421

CCCCGCGGTGGCGGCCGAGGTACTTTGGGAGACCACCCCGAGCTATGGTTCCATACACTT
ANACTGCGCCCAGCTACAGNTTNATACACTTNGGACAAANTATCTGATAAAATAGAGAAA
AAAATCTTATTTACTATAGCATTACATAATAAATTTNTGAGAAAAAAATTAACCAGGGAT
GTAAAAACCTTTACAATAAAAAATAAATAAAAAAGGAAGATCCAAATAAATTTTAAAT
ATTTTATGTCTTTGGATTGAAAGAATAAATATTAATAAAGTGCCATATTATCCAAAGTGA
TCTATAGATTCAATACACTTCCTATCAAAATTGCAGTATTTTTTTCACAGTAATGGAAAT
TCAATTCTAAAATTTACATGAACTAAAATAAATTTGAATAGCCAAAACAGTCTTGAGG
AAAAGGAACAAGGCAGAAGAATATCATACTTACAATTTCAATCTATATTTGAAGACTTTA
TAGAANTAAAA

Sequence 1422

CGGGCAGGTACGATGGGAGGACAGCTTTGTAGAAAGGACATTATCCAGCTAATAGCAAAC
TTTGTGGATCCCAATCCGAGATTTCCCTTGCTGAAAGACAAGAAAGTATCTCATATAAAA
GTGCTGTAGCAAGTATTTGTATACTCCAGAAATAAGCTTCTGTAATTTAGCTGCCAAT
GTGTTCAAGGCGTGATGACTCGGTTTCTGTTTCTCTGAACATCAATACTAGGGTCTGTATA
ATTTCAATGCATGCCACCAGCTTCATCAACCCTT

Sequence 1423

AGGTACAATCAGAATGCTGCATTCTCCAGCCATAAAGATCGCTCCCTCTTCTTTCAAAC
ATCCCTGTCCCTCAAGGTCTAGCTCAAGACGGTCACCTTAAGAAAAGCTCCCTTTGTGCA
GCAGTGACTCCATACCAGGCCCTGCTTTAAACGCTTTATCTGCATTATCTTACTGATTG
TCGCAATAGCCCTGGGTGGTAGGTGCAATTATTATCTCCAGTTTATAAAAGAAAGTACTG
AGGGTCAGAGAAGTTAAGTGACCGGCTCAAGGTGTCACATTCAGTAAGCGTTGAAGGGGC
CTGTGTTGGTCTGTCTTGAAGATGCCCCCTACCGACTACACTTTCAATGATTTTCTGCC
TTGAACCTGGCCCCATGACTAA

Sequence 1424

NNCAAACCTCCTATGCTTTCCCTGGCATCGGCTACACATCATAGTATTCATTGCCTCCTT
GAGGTCACTTTCAGCTTGGACAGAACTCATTTACTGACCGGCTCAGCTCATTCTCTGC
CATTTCGTTTCATCTCATACTCCTTTGCTTTTCAGCATTGCTGACAATGTCCCAAGCTGC
TCGCAAAACCTTGAAGGCCTCCTCAGCCCGGGGATGATGATTTTTGTGAGGATGAACCAT
CACTGCCAGCTGTCTATAG

Sequence 1425

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTGAAGTATTTCCTCC
AAATGGCTCTTTGTGCAGCCGAGCAGCTGTTGAGACTTATGAGCAGACAGGAAGTCCCA
GAGGGCAATGGTGTGTTTTAACTGGCATCTGTTTAAGGCCTTTAACACGTGAATCGTCTG
ATCACCCATTTGCAGGATGTCTTGAGTATACACATTGAGCTGCATGTTTGGATCCCCACC
AGCTGTGCTCAGAAACCCAGAGTGACTTCTACGACAGACAGCACTTCACAGGCATCGCT
GTAGGACTGCAGCTGTCCACTGATGGCACTAATGACCGAGCTGGGGAGGGAGTCCTGGGA
AATGAAAAGCAGGAGAGGGATGTCTGTGGGCTGGGTTTCTGGCATCTCACCACCTGGTAA
GAGAGCCGAGCCCCCTTCACTGCCCAAGCCACATGCG

Sequence 1426

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGGGCCAAGGCTGCAAT
CAGTGATTGAGCCGACTGCTCTTTGAGTCCAGATGTTGATCCAGTTCTTGCTTTTCAACG
AGAAGGATTTGGACGTCAGAGTATGTCAGAAAAACGCACAAAGCAATTTTTCAGATGCCAG
TCAATTGGATTTTCGTTAAAAACACGAAATCAAAAAGCATGGATTTAGGTATAGCTGACGA
GACTAACTCAATACAGTGGATGACCAGAAAGCAGGTTCTCCAGCAGAGATGTGGGTCC
TTCCCTGGGTCTGAAGAAGTCAAGCTCGTTGGAGAGTCTGCAGACCGCAGTTGCCGAGGT
GACTTTGAATGGGGATATTCCTTTCCATCGTCCA

Sequence 1427

AATTGGAGCTCNCCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACATCCAGGAC

TABLE 1
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AAGGTCACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTC
ACCAACTTGACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTG
GACCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGG
CTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTAT
CAACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTA
CCATATTTCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAAT
ATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATTTTCTGAC
TGTCAGTTTCAACATTCAAGGTCTGTCCCCAACAGGCACCAC

Sequence 1428

AGGTACAAATAGATACCTTCAAGGAGAATGAAAACGGGGAATATACTGAGCACTTACACT
CGGCCAGCTGCCAGATCAAAGTTTTCAAGCCCAAAGGTGCAGACAGAAAGCAAAAAACGG
ATAGGGAAAAAATGGAGAAACGAACACCTCATGAAAAGGAGAAATATCAGCCTTCCTATG
AGACAACCATACTCACAGAGGTAAAAAGATTTCTTTTGGTGACAATTCAGTTCATAATT
TTTAATCTTAAAAATTCATCACTTCCAACTGGTCAGAATTTACTTCTCCTAAGCCTTGA
GGGACACAGTATCACATGGATTCTGTGTCCAGCGGCCTTAACAGGAAGATTGCTTTAGAA
TTTGGCACGAACCATGCCACTGTCTCTGT

Sequence 1429

NCNGNCCAGGTA CT C N N N N A C A N T G N A A A C T N N T C A N G N G C C C A T C A T T G C T G G A T T T G T
A T T T A A C A T T A T G T T T C A C C C A G A C A A C A G C T C A G A G A A C T G G G C A A T G G C T G C T N A T G T
G T T G A G C C G G G G C A T A C A G G A T G A A G A G G G A C A A T G A G A G G G A A T G A A T T C T A T T C T A N A
C A C C C T G A G T T T G A G G A A C C T A T G G A A T G T C C A G G A G G C A A C T A A A T G A A C A G C C T G T
G G T A G A C A G A A T A A T G G C C C C A A A G A T G T C T A C A G C C T A A T C C C A G G A G C C T G T G A A A A T
G T T C C C T T C G C A T G G T A A A G G G A T G T G G C A G A T A T G A T T A A G C T A A G G A T C T T G A G A T G G
A G A G T T T A T C A G G A T T A T C C A G G T G T G C C C A G T A T A A T

Sequence 1430

AGGTACGCGGGACACAGGGTCCTGTGCAACANGNGGACTAACAGTAACACCGCCACGCC
GGCAGCAAAGCTCATTTTGGTCCCCGCCCGTTCTCTTTCTTTTAACTCCTTCCCT
CTTTGCGGATTCTAGAACGGAACCTTTTTTTAATTCTTCCAGTAGAAACGTAGGAACAA
TTTCGTGAACGCAATCNGGAGTGCCCAACATGGC

Sequence 1431

AGGTACCCCTGTTTAAACAAGGGGTAGGGGCCCTTCTGAGACTGTTTCCTCTACAGAGTAAG
GGTTCGTT CAGCCTTTTCCGTGGCCTGCCAAGA A C T C A A C T C C A T G T T C C C T C A C T T C C T
G T A A T T G A C C T T G T C C A G G A C T T T C T G A C C T T G G A G A A T T C A C C T T T G C T C T T T C T G C T G
C T T C G T G C A T T C T T C C A C C A A A T G T C T T A A C T G A C T G G G C T C C T T T C C A A A C T C A A G G G C
T T T G C C A A T G C C A C C A G C T C A G G G A G G C C T T T N C T G G C C A T G A C A C T T G A A G T T G C A A C
A C T C C C C C G C A G T C T C C C G T G C C C C A G A T G T A A G T T C C A T G A G G G C A A G C C C T G T G C T T T
T A C C A C C A T A T C C C C A G C A T C T T G A G C T G T G C C T G G C C C A A G A A A T A T T T G T T G A A T G A A
T G A A T T T A A A A G G G G A T T C A T G A N G G C T T A C A C A T T C T C A A T G G G T T

Sequence 1432

GGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGCAGGTACTTTTTTTTTCTTTTT
CTTTTTTTTTTTTTTAAAGTTTTTGGGATCGTGTCTCACTCCTGTTGCGCATGCCTGTA
GTCCCAGCTACTCAGGAGGCTGAGGCAGGATAATTGCTTGAACCCGGGAGGTGGAGGTTG
CAGTGAGCCGAGATCATGCCACTGCACTCCAGCCCTGGGCAACAGAGTGAGACTTTGTCTT
CGGAAAAAAAAAAAAAAAAAAGATTTGGCGGATGAAAATAACCAGAATGAAAATAGCTNGAA
AACTCANCAAGCAGGAAGCTCCCCTTCTACCCCTTTTGTTCCTTGCCGATAGAATCAGT
CACTATTAGAAAAAATGAAAGACGCTCTGTTTAAACAATGATGACAGCAGTACCT

Sequence 1433

GCGGTGGCGGCCGAGGTACTTCCCTTTTAAAGAGATGAGTCACCGCAACTGAAACTTCTCT
ATTTCTTTCTTTCTGATTGTTCTCCAGAATTAGGACTAGTAACAGTCCTGAANNCTTG
TNTTTCCTTATCTAGAAAACAGTATCTTCCCTTCCGTTTGTCTTAAATATTAGTACA
CGCTTTCTCAAGCCTAGCCGATTAGAAGGGGCTGCCGGGCTTCCACCACACCTCATCGAG

TABLE 1
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GNAATGGTTTTNTGGNNAAAAAGCCCATGGAAATACTGAGCCCATGCCNCTCACGTTGNA
AAAGCCCCGTTCCCTTGCC

Sequence 1434

AGCTCCCCGCGGTGGCGTAACTTATCTCATTTTTAGATNAGTTTGCAAAGAGAGTTGGTGG
CTAAGGCCATAGCTTAGCCTCCTGACCCCTACCTTCCCACGTTCTTTCCAAGAGATTCTC
CTCAGGAATAACACTTGCAAGGGAGTTCCTGATGAAGTGGATTCTTGTTATTCTAGGAAT
AGGCCTACATGGTGCCTGGCAATGTGAGATTATACCTCAGCATTTTTCAAAGAGCATAAA
AATCTAGAGCTGGGGGGTTTAAACATGACAAACCTAATTTAAGTAGGCAGACAAATAT
TTAAATTTTTCCCTACCTTGTTTCTACATCGGTCCATTGAGACTCTGCACCATCTGGT
TGGGCAGGTGCTACTGTGGAAGATCTTCGTTTTGACTACCATTTGGTGATTCTTGCTTT
AAAGTCTCAATATCAGTAACTGAACAGATTNCCACCACCCCTTGTTTTATAATATCAC
CCTTAATTAGTTTAAAGTTTCAATCTCCCCATCGGAGGCTAGTTCCTGGTGGGTGAGCATG
TACCTGCCCNCGGCGGCGCTCTANAACCTAAGTGGATCCCC

Sequence 1435

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTTTNTTTTT
TTTTTTTTTTTTTTTTGGAGCCAAAATTGTGTGCATTCTACTGGGAAACACAGTGGCC
AAATCCTTTTGAATTGTTTCTTCTAGAGACTTTAACTCTTCTGACTGCAAATCTTAGTG
TCCTGTGAGTATTAGTTGATTAAATTACTTGCTGCTTAGTGAAATACAGCCAGCTATAG
GTATCTTCTGGAGTAGCTCAACACAACCTTTCTCTTGCTAGAGTGACTCTTGCTAACAGA
ACCCAAAGATGCGCACATATACCCACAGGAGCTGGAGGTCCCTCGCATGCTCCTCTCGTG
CCAGCCTTTGCCCTTACCCTTCACTCTCTCCCTCCAGGAGCCGTGCGGTACCTCGG

Sequence 1436

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGATTTGTCTTGCTC
ACCTCTTACCAAATCCAAGAATGGTTTCTATCCAGTGAATGGCAAATTCATCTGATAGGT
AAGGGAATAATGGGTCAAATGGTAGCAAACACTTCTTTCAAATTTCTACTAAAAGACTT
GCTGTTGTTTTCTTATAAAGGGGCAATTTCAACATACATCTTTTAAAGGAATCTCT
AGAAATTTGAGTGACTTTTTGGCCATAATCCTGTTTGATATATTTTGGTCAGCTGCTCA
AAACAAACATTCTCCTTGTAAGGTTATCTATCTGAAAGATACTAATTCATTTAAAGCAGC
TGCAGGTGAACAACCTAAAGATGACATGATTTGGGAGAAGAGGAAGGCAGATTACTGAAC
TGACAAGTGACCCAAAGCATAATTAGGTTTGTGCACATGGTAGCATGGAGGTTCCACACC
TACCTTCTACAGCGTATTAATAAAGAATATTGTCTTTGAAACATCTTCTAGCACCTTTT
TAATAAAACAAAATTTCCCATCTTCAATTCATTTTTTTCCCAAATCTACCTTTAAAAAA
TTGT

Sequence 1437

CCGCGGTGGCGGCCGAGGTACAATAAACAGGGAATGAGAACTATTTACATGGAAGTTTCT
TTCTCATGATGCGGTGGAGAAGCCTCGGCCACTTGTTCTGCCAGATGTTCTTGGGGTTA
CTGTAATGGGAAGGACAGGCAGAGCTAAACAAGGTAGGAGAATCGCCCCCTTTTTTGA
ATGTTTAAAGAGTTTGCTGCAGTATGCTGCATTCCATGTGTGCTGCTTACGGGAGCCAGG
GAAACTGGGATTCCACTAATTCAATTGTAATACTTGCGGGGGACCCTGGAGTTTTACGTA
ACATTTTGATTTGGGAAAAAAAAAAAAAAAAANANTGTTCTGCCCCGGCG

Sequence 1438

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACTGCCAGGC
ATGCTCCTGCCTTGGGCAGAGTGATATGTGTGAGTGCACCTGCCCTTCCCACAGCCTAG
AACGTTCTCCTCCAGACAGCACATATGGCCTGCTCTCTCACTTCTTAAGGTCTTTATT
CAAAAGTGACTTTCTCAGTGAAGCCCTGTCTGCTCACCCTGCGTAAAATTTAGCTCTTC
TTTCTATCTCTTCCCAGATTTTTTTTCTCCTTCATGTTGTTGGTGTCTAAGGTTTAT
CATCTATTTGCTAATGGTCAGTAGAATGTAACCTCCACGTAAGCAAGGAGTTTTGTCTG
TTTTGTTTATGTCTATGTCCTTAGTGCCTGGAGCATTCCCTAGTATGCAGTAGGTGCTCA
ATAAATGTCAGTTGGATTAATGGCTGAAAGAAAGGTCACCGCTATAAGGATGGAGTCAGA
GAACAAACACAGTTAATTCCTGGTCCACTGTTTTTGCTTCCACTAAATTGATTTGGTCT
ACGGCTTCTCCGCTTGCCCTGGAACCTGCTCAGAACACTGCTCCCTTCTCCTTCTCTT

TABLE 1

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CTCCCTCCGGATAAATTCT

Sequence 1439

CCGGGCAGGTACCGCGGGGGGCCGTGGTCAGAGCGAGCTTCGGAGAAGCAGTGGTGGGTT
CCATGTGATGGTGGAGTAGGAGGCAGGTCTCCGCGGTTTCATCTGTGTTGCTCTAAATGAC
ACTGTTTCATTATTTTATCTGGCTGGAGAATATTTCTAAGTGTATGTATATGAAGAAGTT
TCTTGATCTCTTTATCTGTGGATGAACAGCTACTTTGAAACATATGGTACCTCTGTGGTC
AGACCATTTGCCAAGCTTGTGAGGCCTCCTGTTTCAGGTATACGGTATTGAAGGTCGCTAT
GCCACAGCTCTTTATTCTGCTGCATCAAAACAGAATAAGCTGGAGCAAGTAGAAAAGGAA
GTTGTTGAGAAGTAGCACAAATCCTGAAGGAACCCAAAGTGGCTGCTTCTGTTTTGAATC
CC

Sequence 1440

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCANGGTACGCGGGTGCT
TTCATAGCCGCGGACACAACCTTGGGCCACAGTTAACCGAGGAGGAAGGCAGAGCGTGCT
GAGCAGAGCACCAAGGAAGAGAGCTCGGCTAGCCGGAAGGTCCGAATGGATTATTTGG
TGAGGCCAAGGAACCCACTGCCTCCACGGTGTTCTCCAGGAGGCTCCTCCCTTCACTAA
GGCAGCAAGGAGTGCCTGGTGAGGGGAAGAATTGTTGTCATCCTTTCTCTACGACTCCA
AGAGAACTTTATACTGGAGGAAGAATATTCTACCACTTTGGGATGCTTCCAAAGAAATG
GGATACCAAAGGAGTGAACCTTCAGGTCATTGGAAGTGGCCAAGCTGGAGGCGACCTATGG
AGACATGACCTTCAGTTCTTCTGAGATCGATAAAGCAAAAAAAAAAAAAAAAAAAGT
ACCT

Sequence 1441

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGATATTGTCAATGCGCAACATGGAGAG
ACTTTAAAACAAATGCTAGGGATTAGAGTATAGATCAGATAGCTGGCAAATCTATAGGAA
GGGAAAAGTAATTTTAAACACACAGCATTTGTTTCTGCTGCTCTATCACAATAGCTAGG
TTTTTAAATAAGTAGGCTTTATACCAAGCCATAAAAATGAATTGCTGGGGCTCTTTGGGA
CTAGGGAAGGCGGGAATTTTAGATATTGCTGTTGGCTTAGTGAAAATGCATGCTTACCC
GGTCACCTGTGGCTCCAGCAGGACCAGGGGCACCTACAGCACCAGGAGCACCCCTAGTACC
T

Sequence 1442

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCTTATTACATA
TGATTTTTATTAGTTTCTGGAGGCAAATTTAATTTTATTTTAAAATCAAATCTATTTT
AAAAGAAATAGTTCTCAAAAAGACAACGATGACTGGGTGTGGTGGTGTGTGCCTGTAGTT
CAGGCTGCTCGGGAGACAGAGGCAGGAGAACCCTTGAGGCCAGTTTCAGTCTAGCCTGGG
TAACATAGCAGGACCCTGTCCCTTAATAATAAAAAATTTAA

Sequence 1443

CCGCGGTGGCGGCCGCCGGGCAGGTACTAGGGTGCTCCTGGTGCTGTAGGTGCCCTGG
TCCTGCTGGAGCCACAGGTGACCGGTAAGCATGCATTTTCACTAAGCCAACAGCAATAT
CTAAAATTTCCCGCCTTCCCTAGTCCCAAAGAGCCCCAGCAATTCATTTTATGGCTTGG
TATAAAGCCTACTTATTTAAAAACCTAGCTATTGTGATAGAGCAGCAGGAAACAAATGCT
GTGTGTTTAAATTAATTTTCCCTTCTATAGATTGCCAGCTATCTGATCTATACTCTA
ATCCCTAGCATTTGTTTTAAAGTCTCTCCATGTTGCGCATTAAACAATATCCTAATGCACT
GAGGCTTCTCAAAGCCTTCAATTATTACCAAAAAAAAAAAAAANNTTNNNAGGTACCT

Sequence 1444

CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCGGGCAGGTACAAAGACCAAT
TCCTTCTAACCTGGATTCCACTGTCCTTGGTGAAGAACTACTTTGATGGAACCTACCAGA
TGCTTTATCTTTGGTTAAAGGAACATACCTGTNGAAATTCACACTGCCACAGNGATAT
TTGTTTCTTTCCAATTATNTGTTGCAACANAAGATGACTTTTATACCTCTCACAATCTGG
NTAAAAATCTTGCTTGTTCCTAAAGATACCAAGTGACAAAATCCGTATCAGCAAAATAA
GAGGGAAGAGTCTGAGGAGGAAGAGATCCATGGGATTCATAATTGAAATAGAGATTGGAG
ACCTCCTATTTCAGTTCATAAGCAATGGCACCACAGGTCAGATGCAGTTATCTGAACTCC
AGGAANTTGCTGGTCTCTTGGACAAGCTGTNATTTTAGGAAA

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AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGAGAGTCACTCCTGCC
TTCACCATGAAGTCCAGCGGCCTCTTCCCCTTCTGGTGCTGCTTGCCCTGGAACTCTG
GCACCTTGGGCTGTGGAAGGCTCTGGAAGTGTAAAGTTGGAGTCACTCTGGTCTAATCTG
GGCTGCAGGGTCAGAGGTGGGGTCTCCTTGTGGTGTGGGTGTGTCCCCCTTCTGTAGGCTC
TGATCCCTCAGCTTAGTTTCGGGAGACCTCCCTGAGGGTGAATACATGTCTGGCTGGGC
TCCAAGGTTTGTGTGGCAGTTTGAGCTTCTGGAATGCTTCTCTATGCAGCCATGCTGT
CAGCCCAGGTCCCACTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCATACTNTGCCT
TCTTTCTTTCACCTGTCTGCGACTCTTCAAAAAAAAAAAAAAAAAAAAAA

GGCGAATTGGAGCTCCCGCGGTGGCGGCCGCCGGGCAGGTACTCTTAATCCAAGACAA
AAGAATAGCTCCTTTCAGAGTTCTCATCATTTCTTACCCCAGCCTTAATGGGTATATTC
CTTTTCCCCAGGTGTCCAGAGTTTTCCAGAATTGTCCAAGGCTCAGTCCACACCAGTTC
TTCTCCAGTGTGCTCTCCTGAGAGGCCAGGCACACTCAACAATTATCTAGATGAGTTCCC
ACTTCTTTCCAAGTGAAGGTTCTGCTATCCTAGCATAGTCAGAATAAGTTAAATTATGTC
TCTTAAGAGGCACTGTTCCACTCCTTTTCAAGGNGTGTGGCATATTTGAAATATGTGACT
TAAAAGTCTACAGTCTCTTACCAAAAAGCCTTGGGCCAAATACATGTCAAAATTCAGAATT
TTNCAGATTTTAGAAAAGTGACCCATATACCATACATTGCA

ATATGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACA
TCCAGGACAAGGTCAACCACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCT
GCCTGGTCACCAACTTGACGATGGAATCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCT
CCAATTTGGACCCAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCAT
TCCATTGGCTGGGCTCCACCTACCAAGTTGGTGGACATCCATGTGACAGAAATGGAGTCAT
CAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCA
CCAACCTACCATATTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACA
AAAGGAATATTGAGGATGCGCTCAACCAACTCTTCCGAAACAGCAGCATCAAGAGTTATT
TTTCTGAC

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTTATTCCT
CTTATTGGGATATCATTTTAAAAACTTTATTGGGTTTTTATTGTTGTTGTTTGATCCCTA
ACCCTACAAAGAGCCTTCTATTCCCCTCGCTGTTGGAGCAAACCATTATACCTTACTTC
CAGCAAGCAAAGTGCTTTGACTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAAC
TGTTCTTTTGCATTTTGCCGCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATT
TATAGCAAGATATTGATCAAATATAGAAAGTTGATATTCAACCTCACAAAGGGCTCTCAA
GTATAATCTTTCTATAGCCAACTGCTAATGCAAATTAACATATTTTCAATTTTAAACATGA
TTTCAAAATCAGTTTTTCATACTACCCTTTGCTGGAAGAACTAAAAATATAGCAAATGC
AGAACCACAAAATTCGAATGGGGTAGAAACATTGTAATATTTACTCTTTGCAAACCC
TGGNGGTATTTTATTTTGGCTTCATTTCAATCATTGAAGTATATTCTTATTGGAAATGT
ACCTGCCCGGCCG

CCGCGGTGGCGGCCGCCGGGCAGGTACATCACCCCTGCTGAGGGACATCCAGGACAAGGTC
ACGACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAAC
TTGACGATGGA CTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCC
AGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGC
TCCACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCA
ACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATAT
TCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAG
GATGCGCTCAACCAACTCTCCGAAACAGCAGCATCAAGAGTTATT

CCGCGGTGGCGGCCGAGGTACAAATTGNCGTTTTTATTCTTATTGGGATATCATTTT

TABLE 1

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AAAACTTTATTGGGTTTTATTGTTGNTGNNTGATCCCTAACCTACAAAGAGCCTTCC
TATCCCCCTCGCTGTTGGAGCAAACCATTAACCTTACTTCCAGCAAGCAAAGTGCTTTG
ACTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAAGTGTCTTTTGCAATTTGCG
GCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGATCA
AATATAGAAAGTTGATATTCAACCTCACAGGGCTCTCAAAGTATAATCTTTCTATAGCC
AACTGCTAATGCAAATTAACATATTTTCAATTTAACATGATTTCAAATCAGTTTTTCA
TACTACCTTTGCTGGAAGAACTAAAAATATAGCAAATGCAGAACCAACAAATTCGA
ATGGGTAGAAACATTGTAATATTTACTCTTTGCAAACCTGGNGGTATTTTATTTTGG
CTTCATTTCAATCATTGNAGTATATTCTTAT

Sequence 1451

CCCCGCGGTGGCGGCCGNGGNACAAATTGTCGNTNNTATTCTCTTATTGGGATATCATN
TTAAAACTTTATTGGGTTNTTATTGTTGNTGTGGGNTCCCTAACCTACAAAGAGCCTT
CCTATCCCCCTCGCTGNTGGAGCAAACCATTAACCTTACTTCCAGCAAGCAAAGTGCTT
TGACTNCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAAGTGTCTTTNNCATTTTG
CCNCTGNGATATGNCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGAN
CAAATATNGAAAGTTGNTATTCAACCTCACANGGGCTCTCAAAGTATAATCTTTCTATAG
CCAATGCTAATGCAAATTAACATATTTTCAATNTAACATGATTTCAAATCAGATTTT
CATACTACCCTTTGCTGGAAGAACTAAAAATAT

Sequence 1452

CCCCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTATTCTCTTATTGGGATATCATT
TTAAAACTTTATTGGGTTTTATTGTTGNTGTNGGNCNTAACCTACAAAGAGCCTT
CCTATCCCCCTCGCTGTTGGAGCAAACCATTAACCTTACTTCCAGCAAGCAAAGTGCTT
TGACTTCTTGCTTCANTCATCAGCCAGCAAGAGGGAACAAAAGTGTCTTTTGCAATTTG
CCGCTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGAT
CAAATATAGAAAGTTGATATTCAACCTCACANGGGCTCTCAAAGTATAATCTTTCTATAG
CCAATGCTAATGCAAATTAACATATTTTCAATTTAACATGATTTCAAATCAGTTTTT
CATACTACCCTTTGCTGGAAGAAA

Sequence 1453

GAANCCCCCTTTNGACGAANANNCGGAATCGNGAGCTCCACCGNNGGCGGGCCCGAG
GGGGACNANGANTTTTCTTGNNCNTTTTTTTNNAAAAACNNGNGACTATTTAATCCATC
TAAAAATACAAATCAGGNAANGGGGGGAACCATAGGAAAAATCCTCCACCTNTAACAGAG
CCGAAGNTACNNGGCTTTCTGCTTGCTCCAAANAAATCCAAAGGGCTTGGATAGTTTGN
GGAANGGGGAATTATCTGTGTCTTCAAACCTAACTCCCAAGGATACCTCAAAGGACATTAA
AGGTNTACCACCACCATTTCTGGGGGAAGAAAAAGGGGGGTTTCTTGCCCTTGCTTGAAA
AGCCTTANAAATNNGGGGAAGCCTCAAATNGCCNTTNGGGGGNGNAAAAAGGGGNNCCC
TNTNAATTTTTTNNAAAAAATAATTTGGGTTCCAAAAANAACCCCCCTTTNGAAAGG
GANCAAANGGGGGGGGGGGCCCCCTNCCCCNAAGGCNAAGGGGGGGGGGCCNNTTNGGGG
GGGCCNCNTGGGGGGNNGGNCCCCAAAAACCCCCCTAAACAAANNTNNGGGGGCTGGGC
CCNTAANGAGGAGGGCCCCNCCAGAGCCCAAAANTTNGGGGTTTNNACCCCANNNAAAT
TTTGGGGGGGTNTTTTTTTTACCCCNNTTNNGNCCCCNCCCCCTTGGGGGGGAAAA
AAAACCTTNAAAACCCCNNTTNTTNNAAAACCCCCCGGGGGGGG

Sequence 1454

CTACTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGGGCAGGTACTTTNTTTTTTTT
TTTTTTTTTTATACCAGATTTTAAGGAAAGACTGCTTGCTTCTGANAAAGAATTCTCGG
AGTTGATTCTCTGCTCCATTTGCTCCTTTCTCAACCTCTTTAGTCCTCGTTCTCTGCAGT
AAGAAGCTAGTGACAACTGGAATTTAGCTCCAGNGGGCTTTCTTCCGGGTGGNGCCTGG
ACAGGCTGCTCCTGCTGCTAAGGCTTCTGGAGCTGTTATTGAAGATGTCAGCTTCTGCCA
CTGNGGTCTGCTTTTTGGAGTCTGCATTGGTTTTGCCTCGATCTCTATCATTCTTCTCAT
TATTTTCATGAATGAA

Sequence 1455

CGAGGTACTGACCTCGTNTGTCCCTTCCCCTNCACCGNTCCCCACAGCTTTGCACCCCTT

TABLE 1

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TCCTCCCCATACANACACNNCCATTTTATTNTTTGGGCCATTACCCCATACCCCTTATT
GCTGCCAAAACCACATTGGGGGCTTGGGGGGGGGCCAAGGGGCCTTGGGCATGGGACCAA
GGACCACCTCCCCCTACCCATATCCCTCCCGTGTTGTGGGGTTTNGGGGAAAAAACCT
TTTTGGTTTTTTTTGGGGGGGGTCTTTTTTTTCTCGGAAATTAANAAAAAAGGATT
NCTTACCTACAAGAGAAANAAAGAAAAAAGGGGTACCCTTGGCCCCGGGGGCCGGGGCC
CGGCTTTCTTAAGGAACCTAAGGTGGGGAATTCCCCCCCCGGGGGCCTTGCCAAGGGAAA
TTCCGNATTATTCNAAAGGCCTTTAATCCGGAATNACCCCGGTNCGNACCCTTCGGAGG
GGGGGGGGGGCCCCCGGGTAACCCCAAGCTTTTTTGGTTTCCCC

Sequence 1456

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGAGATAAGACCC
TGAATGCCTCATTCCATTGGCTGGGCTCCACCTACCAGTTGGTGGACATCCATGTGACAG
AAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAGCACCCAGCACTTCTACCTGA
ATTTACCATCACCAACCTACCATATTCGCGGACAAAGCCAGCCAGGCACCACCAATT
ACCAGAGGAACAAAAGGAATATTGAGGATGCGCTCAACCAACTCTCCGAAACAGCAGCA
TCAAGAGTTATTTTTCTGACTGTCAAGTTTCAACATTGAGTCTGTCCCCAACAGGCACC
ACACCGGGGTGGACTCCCTGTGTAACCTCTCGCCACTGGCTCGGAGAGTAGACAGAGTTG
CCATCTATGAGGAATTTCTGCGGATGACCCGGAATGGGTACCTGCCCGGGCCGGCCGCTT
CGGCTTTAGAACTAGTN

Sequence 1457

GGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAAGTCCAAATTTTAAGGAAAATGA
GTCCCGCAATGAGTTTCTCATGCTTCGCCTGTGCGTGGACCGGNCAGCTTCTGGGTGTG
ACTGGAGCAGGGCTTGTCTCCTTCTTCAGAATCACTTTCAGGGGTTGGCAAAGCCGCTC
CCATCCACGTACTCTCTGGACACAATAATTTTGGCCTATTGCCATCAAATGCCATTTTC
CACTGCTGGAAGCAATGTCAAAAAGGGCTGGCCCCAAAAAAGACCCAGAGCTGTCAATA
CAACACTGGAGACAGATGCAACTGAATAAACCTGTTTTACCAATTGCACTATTTGGTC
CT

Sequence 1458

AGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGGAACAGGGATAA
GTTCTTGGATAAGGNGCCAACATACCTATAAAAGCTGATTTTTGAGTAAATTATTGATTC
TAACATATGTAATGGATTTGGTGTGATAATTTTCTGATCTTTAACTATAAGTGACTTTTT
ATTCTCCACCAGAAAAGATAAATGACTGAGAATGTAAGTCTGCGCTCTGATTAACACAAT
GGAGAAACGGAAAACTATCTCTGTTAAAACTGATTCCTGTCACTTCTCTGATATCAAA
TAAGAGGAAGGAAAAATAAATTTTTGTGTGTAGATAGAAAAACATACCTGAGGCCAGGTG
CAGTGGATCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGCAGATCAGCTGAG
GTCAGGAGTTCGAGACCAGCCTGGCCAACATGGNGAAATCACGTCTCTACTAAAAATACA
A

Sequence 1459

NGGGCGAATTGGAGCTCCACCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGCACTC
AGGGAGCTCAGATTTTGAGACAGTAGCTGGCCGATGCTCCAGCTGAATAAAGCCCTTCC
TTCTACAAAAAAGAAAAAGAAAAAAGAAAAACAGGATATCTGAAATTAAGACTGCAGGAT
GGAGTAGTTTTCTGAAATGACAGGGTCCAAGGTGTGACNCACCGGGACCAAGTGGCTGA
ACTGGAATGAAGTTAAGAAGCCAGTAAGAAAAACATCNCGGATAATATGGTGGATCAGTTC
AACAGNAATGACATTATTTCACCCATGGTCCCCAAAGGGAGGAGATGACTGGAGNATTT
CAAATCTTCAAGGCAAGCCCTCAATGCCAGCCAGAGGATTTTAANGAGGGGCCTATTG
TTGTTCCCAGAAAGGAGGACTCTGNGGCCAAACCGCCAAGAATGGGATTTCAAGAATTT
ACTTCAAAATTCCTGTGAGGATTTCTTTAACCCCTGGGTGGGGCTTATACCCAAAACCCCA
AAAAAATTTTAAGCCAGCCTTCNTACTTTTTGGCTTAATTTTTCTCCCTAAAGCCCCAA
CCCTTGGGCNTTTTTTT

Sequence 1460

ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTCAGAAATCCTTCCCCGAATT
TACAGCACAGGCAGGATGACCTAAGAGGCAGTTTACTTCCCTGAGACCCACAGTTGGGCT

TABLE 1
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GTTCTGGAAACACATCTGTGAATCATAGCCAATTGCCACAGAGAAAACAGAACCAAGCCT
CCGGTGAGGCCACTCCACCCCAGAGAAGTCTGCAGAATTCCAAGGACTCGGATTGGATGT
TCAGAATTCAGCAACTGGAAAGTCCTTAAAAACAAACAGGCCAAACCAATCAATATTGC
TGTTTCTAGATGTCCCTTCTGTGGTTGAGCTAGTTTACAGAGATAAATATATTAAGACA
AGGAGGTGGGGGTGTTATATGATCAATGATAGCCATTTTGAAGAGAGGGAGGAGTACTT
TTTTTTTTTTTTTTTTTCCAAGCACGTGCCACTTTATTGAATGACACTGTAGACAGGT
GTGTGGGTATAAAGTGTGTATCTAGGGGCAGGACCAAGGGGGCAGGG

Sequence 1461

AGGTACGCGGGGCTCAAGAATAAGCTGAAATATGGCCAGACTATCAGGCCCATTTGTCTC
CCCTGCACCGAGGGGAACAACCTCGAGCCTTTGAGGGCTTCCTCCAANCCTACCCACTTTGG
CCAGTCANACCAAAAAAGGGGAAAGNAGGCCTGGCTTCCCCTTGNCAACAAGGGNATTA
ATTCCAAAAGNCCTTCTGGTTTTTGGNTGGTNCCTTGAAGGGNAAGGGNAGGAAAAA
AAAAGNCCTTGNAACTTCGGGGAAGGGGNAGGGTTCCTTAACAATCAAAGGAAATTG
GGGGGGGAATAAAAGGAAAAANGGGGCCAAGNCCTTGGTTTGAAGGAAGGNAGGTATG
GCTTCAAATTAATGGCCCCCAANGGCTTAATTGAACCAAAAAAGGTNCAAAAGGGGAA
CAATTCTCAANAAGGGGTGGGGTCCACCCCCCCTTCGGGGTTTTCCCCTTTTGGTT
ACCCCTTGGCCCCCGNNNCCGGGCCCNGCCTTCCTAAGAAANCNTAGGGTTGGGGNANT
NCCCCCCCCNGGG

Sequence 1462

GCGGGCAGGTACATGGATGGGAGCAGCTTACCAACCCCTGCAAAGTGAAGTCTGAAGAAG
ACGACAAGCCCTGCTCCAGTCACACCCGGNAAGNCTGACTGNNTNCCACCGCNACAGNCT
GAAAGGCATTGAGGGNAAAACCTCAATTCNTCGGGGNACCTAAATTTTTCCCCTTTAA
AANATTTTTAAGTAACCTTTGGCCAACCAAGGTAAAGGGGGAACCTTTCCAAAACNTNG
AACCCTTTCCCTCCAAGNATTTGNAAGGAAACNTGTTNTTCCAGGTTAATTAATTAC
CNATTTCCAAAAGGTTCCAACCTTTNGGAANGGGGTTAAGGGGGAACCAANAAAAAATT
TTGGCTTAACCAAGGTTCCCTNAATTAATAATTTTTTAAAANGGGGGTTTTTTTTTTTA
TATAAAAAGGGNGNTGGTNTNANNNCCCTTTTNGGNGGTCCCCCTTTTTTTTTTTNAA
GAAAAANCCNTAAGGGGNGGGGGAATTCCCCCCCCCCGGGGNNCCNTTGGGCCAAA
NGGGAAAAATTTTCCNGNATTTAATTTCCAAA

Sequence 1463

AGGTACGCGGGGAGGCATTGAGGCAGCCAGCGCAGGGGCTTCTGCTGAGGGGGCAGGCGG
AGCTTGAGGAAACCCGAGATAAGTTTTTCTCTTTGNAAAGANTCCNCNTTTAAAA
TAACCAAAACCTTACCTTTAAAAAAAATTAATTANGTTCCAAAATTAANGGGNTTTTA
ACCTTNAAGGNAATTAATTTTTNGGCCTTTTAAANNCCGGGTTTTTAAAAGNGTTT
TTTTTTTTTAAAACCCGTTTAAAAATTTTTTTTTTAAAAATTAAGGCCCTTTTTAAA
AGNNAATTTTTTTTTTAAAGGNGANGGAAAAAAAATTTTTTTTTTGGNANAAGTGAAA
ANCTTTTTNTTAAAAAATNTAAANNNTNTTAGTCCCTNNTTTTTNTAANAGGNGGG
NAAATGGGNGGGGTNNNANANAAGGAATTTAAAAAANTGGGNTNTTTTTNTTAAAAAA
AAACCAATTTTATCCCTTGNTNAGGGGTTTTTGGGNAAGNNAATATGGAAAAANAAN
CCTTTTNTCT

Sequence 1464

TTTGAGAAGCCAGCGCTCACCCACCCGGGTCTCTGTGCATTGACCTTTGGGTGCTGACT
TGGAGAAAAGCACAAACACGACCAGTCCCATCCTGGGCTCCCGNNGGCCGNCCTTTCTTT
CCTAATNCTTACCGCCATTTTGGTATTCCGGACCTGGCCAATTTTAGGTTTNGGGACCTT
AAAAGNAATTGGAATTGGAACCTTCCAAGTTTTTAAAAAAGGGGAAGGGGAAGNAACC
NAAANATTNNCCTTNGAACCTTGGTTCCTTAAAAGNCCAAANGGAAATTGGGGCCCCC
AANAGNCCCTTGNNNGCCAAAAAGGNAAAAAAGNNCCNAACCCAACCTTTGGNN
CNAATTTAACCNAATTTAAGGGGGGAAATTACCAAGGAAAAGGGGGNCCAAGGAAGG
CCTTTTCTTGGGCCCTTGNGCCGGGGGAATTCCTTNGGCCAAAAACCAATTTTTTA
ACCCANTTTTTTTGGGTTTTTTTTTGGGCCCTTTGGCCCAANAAAACCTTAACCCC
CCCCGGGCGGGTTNACCCCTTCGGGGGGGCCCNCGCCTTCCTTAAGGNAAAACCTT

TABLE 1
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AAAGGNNTTGGGGGGNAATTTCCCCCCCCCCCCGG

Sequence 1465

AGGTACTTTATTTTTCTTTTTTTTTTTTTTGTGGATGGGGACTTGTGAATTTTTCTAAA
GGTGCTATTTAACATGGGAGGAGAGCCGTGTGCCGNATCCAGCCCAAGCCCNCCGNTT
CACTTTTTCNCACACNCTTTNTTTTTCAACCCCTTGGCACCTTCTGGGGCNTTACTTTAA
AAGNGNCCCTTTNTTTGGNCATTACATTAGCAGCGGAAAACANCCTTTTANTTNCTTT
CCCCNTTATTGGNGAANANAACCTCCCATTTTTNTTTNTTCAAANAAGGAGCATTNGNC
AAANANCTNCCCAAATNTNNCCTTNNACCACNGNGGNCNNTANNCCACNNTNCTANCTT
NAGGNGNNGCCATTGGGTTNCNCCCTTGNCCNGGAANTCTNCCCTTTCCNTTNGN
TTTTNTCCCNCGGNGTTTTTTCCAAGNGAAGNGANCCCANAAATCCTTTTTNNNN
CNCNAANAAAAANGTTNAANCCNAAAAAAGNGCCCAAGAGTTTTTTTTTTTTCCCC
CCCCC

Sequence 1466

AGGTACACTGAAACATAAATCCGCAAGTCACCACACATACAACACCCGGCAGGAAAAAAC
AAAAACAGCAAGTTTACATGATCCCTGTAACAGGCCATGGNNCTNCAANNCTTCAGGAAT
GCCTTNCCNTCNCATTCTGGCCCAAAGNTGGTTGTTTNCNTGGGAATNACCAGGNAGGCC
ACCAATTCGGTGGGGCCTNTCCTGGGGGGNGGTTCAACCAACCTNCAAGNCTTTAAGGG
CTTGGTTGGGGGTCCCCACCANGAGGCCACCTTNCATTTCTGGGCTTGGGGGACCTAA
TTGNGGNTGGGGTGGGNTTGGGACCTTCCTTAACCTTCCAAAAGTAAGNCAANAAGCNT
GTTTAACCCAAGCCAACAATTTNCAAAAAACCAAGGTTGGTAATTTGGNAAACCANTCCT
TTTTTTNAAAAATNATTCAAAAAAGTTNGAAGGAAAAANCCANAGGAAANGGGNCAAAC
CATTAAANTTAAATNGGTTTAAATCCAAGNAAAAAAG

Sequence 1467

CCGGGCAGGTACTTTTTTTTTTTTTTTTATAACTGAAGCTTTATCTGGAGTGGGGGAA
TGGGGGTGTGGTCAGTTGGGGCACCCAAAGACAAGCCATGCCNCCNCCCNCGGAAANGCC
GCNCAGAGGGTTCCCTTGGGCAATNTGGTATNTACTGGGGTATCCTTCTTNTGCGGTTNC
TTTCGGGNCAATTTTTCCGATNNCCACCTTTNNCCTTACAAAGGGNCCCAANNNTTGN
CTTTCTCCANCNCCCCAAAAGGTTNNGTGCCCTTTTNNNCCCGNAANNNGGAATTGTT
NAAGNCCTTNGNAAGNGGTTATTGGGGAGGACCATTTTCTTTCTTTNCCCCCCCCCA
AGGAAAAAATAATTTCCNGTGTTNAAGNGGTAATGNNAAGTAACCTCCCCCAACCA
AATTGGAAAGGGGNTTAAAGAANTGGNTTTTTTACCTTTTTTCTTACCNCCTTTCCNC
CAAANNNCCTTTTTTCAAAGGGGGGGGCCCTTTTTCTTTCTTTAANCCCAAACCTTT
TTNGGAAATNGGGGGGGGGGCCCTTGGGAATTTGGAAAAANCCGGNTTNGGCCCGGN
CCTTTGGGTCTTTGGTTTTCCCCAAAAACCCCTTNGGGCCAAACCCCCCT

Sequence 1468

AGGTACGCGGGTGGTGAAAAAAGAAGTAGAAATCGTGGCCACCTCCCTCTTGGGGTCGT
CGCCCTCGAGATGATTATCCGTAGGAGGGAGTTCCTCCACCTCCNNCGCCACAATCTTCC
CAAAGAAAGGGGAGAAAGTCTTTCTTCTCGGCAGNCNCGNGTAGTCNAGNGGTTCCC
CCTTTTTCTTAGGNAGGCATTTAAGGGGNAAGTAAGGAAGGNAGGAAGNAATTCCGG
CCTTGGTTCNTTCGGGGGNAGTAAGNAAAAATTCACCANAGTCCCGGTCCCGGAATTC
CCTTTTCNTTCTTAAGGGGGTTCCTTCCGTTAAGGTTCCGNAATTCCTTAAGGGGTTNC
AAAATGAAAAAGNGAAAAATTAAGGAAAGNAACCAAGGTTTTTGGCCAAAGGAAGAAA
AGGTTGGGGTGGTTAACCCCTTGGCCCCCGGGGGGCNGGGCCCCGGCTTTCCTTAAGAA
AACCTTAGGGTNGGAAATCCCCCCCCCGGGGGGCCTTGGC

Sequence 1469

CCGGGCAGGTACTTTTTTTTTTTTTTTTATAACTGAAGCTTTATCTGGAGTGGGGGAA
TGGGGGTGTGGTCAGTTGGGGCACCCAAAGNACAACCTCATGCCTCCTNCNNNGAAAGGNC
GGCCCAAGGGTCCCTGGGCCAATTTGGTTTTCTNTGGGATTTCTTCTTTTCGGNTACATCG
GGNCAATTTTCGNTACACCTNCNCTNCNAAGGGNCCNAGGTNTGGCTTTCNCNCCG
GCAANAGNTNGTNCCCTTTTACCCGGAATGGAATGGTTAAGACCTTGNAAGNGGATTTT
GGGNGGACCTTTTNCATTANCTTACCCCCCAANGTAAAAAATTTCCGGTNNTAAGGG

TABLE 1

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GNAAGAAAAGGAACCCNCCCAACAATTGAAGNGGTTAAGGTTGGGTATTTTCCTTTTCC
TTTCCCCCTTTCCCAAAGGCCNTTTTTCNAAGGGGGGGGCCTTTTTCCTTTTTCATTAAACC
AACCTTTTTGGNAATTGGGGGGGGGNCCTTGGGAATTGGGAAAAAACCGTTTNCCTCG
CCTTTNTCTTTGNGTTCNCCAAAAACCCCTTGGGCCAAACC

Sequence 1470

AGGTACGCGGGTGGTGAAAAAGAAGTAGAAATCGTGGCCACCTCCCTCTTGGGGTCGT
CGCCCTCGAGATGATTATCCGTAGGAGGGAGTNCCTCCACCTCCNCCNCCNATTCTTC
CCAAAGAAAGNAGAAAGAACNCCTTTCTTCTCGGCAAGNCCNGNAGGCCAGGGGNTGC
NCCCTTTTTTCNTAAGGAAGTATTNAGGGGGAGTAAANGTAAGTAAGGAAGGAATTCCGG
CCTTGGTTCNTTCCGNGGGTAGGAAGGAAAAAATTCCAACCAAGGCCCGNTCCCCGA
ATNCCCTTTTCTTCTTNAGGGGTTNCNTNCGGGTTAGNTTCCGGAATTCTTAAGGGGT
TCAAATGGAAAAAGGGAAAAATTAGGGAAAGTAACCAGGTTTTTTGGCAAAGGAAGGAA
AGGTTGGGGGTTGGNTAACCCCTGGCCCCCGNGGGCGGGGCGCCGGCTTCTAAGAAACC
TAGGGTGGGGAATCCCCCCCCGNGGGGCCTTGCCAAGGGGAAANTTTTCCGNAATTAAT
TCCAAAAGG

Sequence 1471

AGGTACAAACGAGTCCTGGCCTTGTCTGTGGAGACGGATTACACCTTCCCACTTGCTGAA
AAGGTCAAGGCCCTTCTTGGCTGATCCATCTGCCTTTGTGGGCTGCNTGCCCCCTGGTGGG
CTNGCCTGNCCCACCCAACCAGGCNTGGCTTCCCTGCCTTGGCCTTGGCCTTGGCAAGGC
TCCCCCAGGCCTTAAAGGGGTTTTGGNAAAGGNCNCCAAAGGGGAAAAGGAAGGTTCCGG
GAAGGGGAANTTCCNGGGAACCGAAGGGNATTAATGGGGGGAATTTTTTGGGGTCTTNC
TTTTTGGACCNTAAAAATTCNAACCCCAAAAAAAAAAAAAAGGNCCNAAANCCCCCAAAA
ANCCTTTTTTAAGNCCCCAAGGTTTTTTTTTAATTTTTTGGCCAAAAAAAAAACCAAGGG
GGGAAAAAAAAANTTAAAAAAAGGGGGGCCCTTTTAAACCTTTTTTCCAANTTANANTAT
AANAATAAATANNANAANNNNNNTNNGNGGGTTTAAACCCCTTTGGGCCCCCGGGG
GGGNCCCGGGGGCCCCCGGGNTTCTTAAAGGAAAAACCTTAANGGGTNGGGGGGAAA
TTCCCCCCCCCCCCCGGGGGGGGCCCTTGGGCCCAAAGGGGGAAAAAA

Sequence 1472

AGGTACAGAGTCTTTTGCTTCTCCACCCCTAGGGGGAAAAACTGCTTTGTGCTTTGGG
AAGTTGTCTCTGAAACCCGGGGACAGAGGACCGCAGGACAGANCTACCGNCGGGGAGNCN
CGNGGNAGGGAATGGGGGCATGCAAGTCATGNTGAGAAGNGGAGNGTGATCTTACAAGCA
NNGGAAGNACGTATGNGGTCCCGNGTAAGNAAGTCCANGTAAGNGNCCCCTTGAAGNAA
AGTCCCAAGTANCGACCAAGTNTTGNAGTAAGTAGGGTGNTGGGNAAATAGGTTGNANC
CCATNTCCGGGGGTCTTGGGGGGNCCTTGGGTAAGNCCNCGNCCAACCAACTGCTTCT
CCTNCCCCAATGGTTTAAAAAATTAGGCCACCCCTTTTTTAAGGAAAAAAAAAATTTTC
CAACCAAAAGGGTTCNCCNCCCAATCCCAACCATANAAAAAANATAGATANACACAN
AAAGGGGAAAAGGTTACCCCTT

Sequence 1473

AGGTACTGGTGTGTCCGGAATCCTACCACTGTGATGACAGTGCCTGATAGTTTCTTCTG
CCTTTCTATCCCAAACGATTGGTCAGTTTACCCAAGGTTTGGCAAATGGCCAGCCTTNA
GNAATCTTCCCAGGGGAANCAATNCTTCTTTCTTAGGTTAAGNTTTGGCCCCCTTAA
GNCCCAATTCTTTTNGGTTAAGGTTTTGGNAATNTTGAACCTNTNTTNTTNTNT
NTNTNTTGTGGCCTTTTCCCAGGAAAAAGGCCTTCTAATGNCCTTCAATTAATGGGG
AACCTTNGGCCANTAACCCCAAAATTTTTTTTTTNGGGTTTTNCAATTTCTTGGGTT
TTTGGGGGTTNCAATGGAATGGGGTTTAAAGGCAAGAAAGGCCCTTGGANCCCCCTCCCC
NTGGGTTTTAACCAAAATTAAGGAAAAATTGGAAATTCGGGGTTTTTCCCCTTGGGGGG
CCTTAACCAAGGAACCTTTTGAAGGGTTCCTNGGTNTTTTTTTTTTTTTGGGTTTTTT
TTTTAAAAAANCCCCNTNTNCCCCCAATNGGGTTGGGGGGCCNAAAAA

Sequence 1474

CGCGGTGGCGGCCCGCCGGGCAGGTACTTTTTCTTTTTTTTTTTTTTNGGGATGGGGAC
TTGTGAATTTTTCTAAAGNGCTATTTAACATGGGAGGAGAGCCGTGTTGCCGGCTCCAG

TABLE 1

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CCCAGCCCCGCNTGCTTCACNTTCCACCNCTTTTNTTCTCACCTTGCCTTCTTGGGCT
TTTCTNCAAGGGCCCTNNTGGCCTTCTTCCCCGNACCCCTTTGGTTCTTCNCTTCTGG
AAANAACCCNCTTCNCTNCCAACCAACCTNNGCAGNCTCCCATTNNTTCCCCGGGCT
TCCCCNCTCNCCTTAAGGTTCTTGGTCCCCCTTGGCCGGTTCNCCTTCTTGGTCCCCCG
GGGTTTTTCAAGNAGNAACAAANCNTTNCCTTAAAAANGCCAACAAAAAAGGCCAAGGT
TTTTTTTCCCCCCTTAAAGNNGGNNTGGGGGGGAAGGGGGAAAAGNCCAAAAAAA
GGAACCTTCTTGGTACCCCTTTTNGGGGCCCGGGCTTCTTAAAGAAAACCTAAGGGTG
GGGGAAATNCCCCCCCCCG

Sequence 1475

AGGTACTTCAATCCTGAATTAATCTTTAAACACTTTCAAATATGGAGATTAATCACCAAC
TTCTTATTTTTTGGGCCAGTTGGATTCAATTTTTTATTTAACCATGGANCTCTTTCNTAT
TATTCGGTTACCTNGTNCGGAAATGGCCTAGGAAAGNAAAGGGCCTTCTTTTNCNGGAG
GGGTTNCGGGGAACCAAGNAGGAACCTTTTTGGTNAATTTTTAATTGGTTTCCCTT
TTTTTGGNTGGGAATTTCTTTAAATNGAACCCCAAGTTCCGGGAACAAGGGAATTG
NAGGCCCAAAGGTTCAAAAAAGGGGAAAACNTTTTTNTNAAACCCCCCAAGGGTATT
GGCAAGTTTGGGACCACCATTAAATTTTTTTTTTCTTTGGGGAAAAGGGAATGGT
TAATTTTTTCCCCCAAATTCAAAANCCCTGGGGTGGGGAAATTAAGGGAAAATTT
TCNTGGAAAAAACCAACCAATTCTAATTTTTTGGAAAAAGGCCTTAATTTTTTTTT
TGGAATAACCAACCC

Sequence 1476

AGGTACAAAATTTTATTAAGGTCTTTAGAGAGCAACATCCAGACTCCAGAATACAGCTG
NGNAGGAGACCCTGTTATGCTGTGGGACTGGGCTGGGGCATTGGAAAAGCNCCTCCNTC
TGGGCCTTCCCAACNCCCTTTANTTGTCTTGNAAAGAAATGGGNGGGGNTTGNNTGGG
NGNCNATGATNATTANCTTTCAATTTCTTTTAGGGGGGATTTTNAACCAACCAAAAATTG
NCCTTTCNAAACCGGTTGNGGNNTTCCATGTGNCCAAGGGNGGNGGCCCTTTCTTTTTA
NGGGGNCCCCCAAANTTCNTTTNAAACCCCAANTANTTTGNTTTTTCCGGNNAANGT
CCCGGTGTTTTNTACCCGGAAAATTCTCCGGNGGGGNANCAAANGNGNNTTNCCTTGG
TTGNGTATTNCCCCAACTAATTTAAAAAATAAC

Sequence 1477

CGGCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTGGATGAAATGCCAGGGTGA
AAGGGATAGCCAAATAGGCTAAAGCACAAAGTGCCACTCTAGGTTAATTTCCGCAGGACNN
GCCCCAAATAAAAGGGTCCACCNAGACCANNTTACCCAATNCAACAACCATTTCCCGGNT
TTCGGGG

Sequence 1478

AGGTACCTTAACCTGAGTTACAGGGCTGGTCCCTCTCTTTTCATTTTTATCCCAGTAGG
TGAGACCGTCCCTGCTGTGTTCCGGTGGCTGTGGAGTTGATGGCATCTTGTCCAGGTGA
CACCTGCATGCTGGCCAGCTGAGCGGCATAGAGCTGCTGCAAAACAGGGAAGACAAACAT
TGATCTCTTTAAATGCAGCTGAAATTGAGTTTCAAAAGAAAAAAGTTACCATATTGTTAG
ATTTCTCAGACAGCCTTGTAATTTCTTTTCACTATTTTTAAAAAAGGGAGCTAAGAGAA
GGCAATAATAAAACAGAAAGAAAAAGGACAGGTATGGGAGCCATAGTTCTGTTTCTGGT
CCTTCTAGCAACAACCTTATGATCCTGGACAAAGGATTGATCTCTTAGAATTCAAGTT
TTTTTTTTA

Sequence 1479

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAACACCTGCTAAAGACATAGC
TTAATAAATATTTGTTGAATGTTGAATGAAGAGCATTTTCTGCTCATAAATTTCTC
ATTACTTAACGAATGTAGAATAAATTCCTTACTCTGGCAGACTGGAATATGTAGTTACAG
TTTATTCTAGAATTTTTGCATTTCCCTTCTTCTGTTCACTTGGAGAAGTTCTTTCCAT
CCTAAGTGACCCAGGTGAGTCCAGTGTCTGCTGATTTCACTGCAGGGCAGGCATGTGAT
CCAGGCTGGCCACAGTGGTCAGTGTGGACAAGTACCCTTGTTCATCTGTGGAGTCTAAC
AAAAGTAGTGCCCCCTTATCCTCGGTGGTTATGTTCCAAGATGCCCAAGTGGATGCCTGA
AACCGTGGATAGTACCTGCCCGGGCGGNCGNTCTAAACTAAGTG

TABLE 1
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Sequence 1480

CCGCGGTGGCGGCCGAGGTACTTAGCATTGATCAAAGAAATTTCAAATTACCGATCAATT
GGGTGGGGAGAGGAATTTTCATTGTCCAAGCACCCCTCAGGGAACAGAAGTCAAAGCAATA
ACATATTCAGCAATGCAGGTCTATAATGAAGAGAACCCGGAAGTTTTGTGATCATTGAC
ATTTAAGACACCAAAAAATAAAGACTCCTACGAAGAACTGTTTTGTTTTCTCTTCCT
TTTGAGAAGACACTATGAATTAATTCTACAGCTTTTTTTTGATATATGGAATTTGTAG
AACAGAAATATTTTAGTTAAAGTGTGACTTTCAGAAAGGGAAAAATCAGGGCACAGCCTTG
GTCTGTGTTCCCCAAATATTCACACTTTAAGAATTCTTAAC

Sequence 1481

ATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATGATTGTCTTTATGCATTAAATTCAT
GCTTTTACATACTTGTGTTTCCTTTTCATTCGTCCTTCCAAATCATTATTTTAGGAATA
TAGAGAAAAGGGTTGGCCAGGTGCAGTGACTCACACCTGCAATCCCAGCACTTTGGGAGG
TCGAGGTGGGTGGATCACTTGAGGCTAGGATTTTGAGACCAGCCTGACCAACATGGAGAA
ACCCCATCTCTACTGAAAATACAAAATTACCCGGGTGTGGTGGCGCATGCCTGTAACCTC
AGCTACTCGGGAGGCTGAGGCCAAAAGAATTGCTTGAATCTGGGAGGCGGAGGTTGTGGTG
AGCCAAGATCGTGCCATTGCACTCCAGCCTGGGCAACAAGAGCGAAACTCCGTCTCAAAA
AAATTAATAAATAAGGCTTATGTGCAGTTATTCTCAATGAGCTAAAAAGCTTCCTGAGG
CTAGAAATCTTGTCATTTTTGGCTGGGA

Sequence 1482

CCGCGGTGGCGGCCGCGGCCGAGGTACTATCTATTTGGCCTTGAAAGTTACTCTCTAAG
TCAGGGCTTCTTTTCTTNACTTTGGTGTGAGACTCCGCTGGAGAGCCGGTTAGAAAAAC
ACAAGTCTCGGGCCCCACCCGCGAGAGCCCTCATTCTCTAGTTCTGGGTTGGGGCCAG
GAGTCTGCTTTTCTAGCAAGCGCCCAGATGTCACTGATGCTTACAGCTCTCANACCACAG
TTGGAGCAGNGATTTTTAAAAGTCTTTTCATTTGTAAAGAGTNGTTCTCCATGCTCCAAA
TGACTGNGACGACTGAGAAAATGCATGTATGTAAAGTCTGCANCTGGTGACATTGTACAC
ACTNAGCAAATGGCCTTNGGTGTTACTGTNANTTTATTTTTACTAATTATTTNTNNCAC
NACAAATTNGGANCTGCTNCAATCGGTNGGAATTTGAAATTGGGC

Sequence 1483

GCTGCCATCAGCTCCCTAGGAGCTCTCCCTCCAGGAAGGGAATGTGTCCACCGTCAGACA
CTCAGACCCAGCATGTGGGGACAGAGGCTGATGGCCTGTCTGGCCATTCTCTCAGTTCC
TCTCCTCACTAGCTTGTGTCCTTGTGCAAGTCACTTACCCTCTCTGAGGTTCAAGTTCCCT
CCTCTTTGAAGTGGGTTTAATAATAAGTACCTGCCG

Sequence 1484

CCGCGGTGGCGGCCGCGGCCGAGGTACTGCCCTTTCGTTAGAAGGCAGTGACTCCTTTC
TGTGAAGCCGATTTAGTGAAGTGTCTGTGCAGAAAAGAGTCCAGGGCTGTCAGTTAATT
TCTTCGGCCACTGGAGTTAGGGTTTGAAGTCTGCAGCTGCCTATTGCACTTGTGAAAA
GGTTTGTATGTTCACTGCTGGCTGGCTCAGAGTTGGGAGTGAATCCTCCAAGGGATA
AGCTTGGAGAACTTTCTGAACAGTCAATCTGTAAAGGTGTCTGCAATCCAAGGCCAATG
GACTAGATTCTGAAGGCTCTCGGTGGACCCACTGTTCTCTCTGTTTATTAAGCTTTTG
AAGGAGAGAGATGAGGGCAGGACATGTGACAACGGTGCTTTTCCTTATGCTTATATCGCT
CTCCAACAGCATCCTT

Sequence 1485

AGGTACATGCAAGTTGCATGATTATAATGACGTGATCCTGGGATTTAAGTTGATTATGAC
AGGAACAGAAGGAAGTGGAGATTAGGGACAATGAAAAGGTGGTAGTGAAAGGAGTGTG
GAGTTAAGTTACTAGATGTCTGGAAGACAGACTGTGGTGGTCAGATAATGAGATAGATTA
TGGAGGGGTTACAGTTTTTGGTAATAACGAGAGAGATCTAAGGTATGACTGAGAGTGAAT
GGATGAGAATAGCAGAGAACAAGGTCAGTGGAAGTACTCTTCAAAGAACCTATAGTCA
GGGTGTTGAAAGATTAATAAATTGCTAAGAATTAATCAGGAAGTAGTGCTGCGGGAAATG
AATGAGCAGTGAAGTAACTTACTGAGAAATGAGAGGGGATGACCCAAGGGTTGTAGA
TTTTGTAGATGATAGCA

Sequence 1486

TABLE 1

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AGGTACATGACATCCGACGAAATGAGACGCCACCTAATTGATTTCCGGGAGTCCGCACCA
GGGGCCCTCAGGGAAGAGACCCCGCAAAGATCCTGGGAGACCAAGGTGGGGACCTGGGT
AGAAGAGAGAGTTTCAGGGGAGTCTCTTTCATTGCCCTTCTGCTAACCCAAGCATTAAAT
TGCTAAGTATTTACCAGGGGAGTGGGAAAAAGAGTTGAGCGGGATTCTCTTAGGCTATGA
GAGAGTCAGGCAGCCCCCAAGATAAAATAATGAACTAGAAAATCTGGAACCTTACTTCTC
TGGGAATNTTACCTATCTGGCACCGTGGGAAGAAAGAAAAAAGGCTACTGAGTACCTGCC
CG

Sequence 1487

GCGGTGGCGGCGGAGGTACTGACCTCTGCCAGTCAGCTGCGTAACTCCAGGCCCTAGGGT
GCCCCGTCTGTCCAGCCAGGGATTGCATGGATATGCTGTGATCTCCCTTTTGGTTCTGAT
TGAGTTGGACCTTGTGGGAGGAGAAACATAGATGTTGATACATGAACACATATGTTGGAG
AGAGAAAGTTTTATCTTGGCATAGGACTTTTAAACACAAGGTAATTTTTAATCAGTTTT
GGGACCAAAAAACACTCAATATGGGAAAAATCCAAATTCTGCCAAAATGTCTAAAGAGGT
TTATTCTGAACCAAGTATAAGTGACTGTGGTCTAGGTTACACAATTTCAAGAGATCCTGAT
AAAGCGTGCATGAGAGAGTTGGGCTACAGCTTGGTTTTACACATTTTCAGGGAGACAGGAA
TTGTANGGTAAAATTATGGCACAGGACTTTTAAATGAAGCTGTGAAAGTTTACAGTCCA
TAGAGAATAAAAAATCTAGAAGTTT

Sequence 1488

CCGCGGTGGCGGCGGAGGTACTTGACACGACATATGGTAAATGAATAAGACAAAGGCTCT
GATGGCTTCTCACAGCCCTGTGGATCAAATCAGATTCTTTTCTAGAACCCCAAGGCCCT
GTCAGTCTCACTAGCCTCTCTCCAGACACACCAGCCTTTTTCTACCTTTCCAACATCCCA
AGTTCCTTTTCTCTTACAGGACTACATACACTCTCTCTTCTGCCAGAAACCATGTTCTAC
CAGCTAATTTCACTCAACTTTTAAGTCTCANCTGAAATGTTACTTCCAAAGAGAGGCCT
CCACTGAACCCCAAGCCTGGGGTTCACAGCACCTGTCTCCATAACTACATAATAATCTCT
CTGATGTTTAGGCTGGGCATGGTGGCTCACGCCTGTAATGCCAGCACTTTGGGAGGCCAA
GGCG

Sequence 1489

GGGCGAATTGGAGCTCCCCGNGGTGGCGGCCGGGCAGGTACCCAGAGTTGCGAGGAGTTT
TTTAACTGATTTAGCCAGGTGGCAANCATNAGTGAATGGATGAAGAAAGGCCCTTAGAA
TGGCAAGATTACATTTACAAAGAGGTCCGAGTGACAGCCAGTGAGAAGAATGAGTATAAA
GGATGGGTTTTAACTACAGACCCAGTCTCTGCCAATATTGTCCTTGTGAACTTCCTTGAA
GATGGCAGCATGTCTGTGACCGGAATTATGGGACATGCTGTGCAGACTGTTGAAACTATG
A

Sequence 1490

GATNAGCTCGATATNGAATNNCNCNNGGGGANNCCANNNGNACAAGAGCGGANNCC
NNCGCAGAGGAGCTNCAANTTTACACACTGTTTAAATGAGGGAATANGCNGCAGCGCTTG
GATGTAAGTGAAGAAGACAGTNNGAGCNCNAAGGAGGGACAACCACGACCTATGAGGACA
CCATGCCAGAGAGGCCTGGACCCCAAGCTAGGCTCAGTGCCTGTTATACTCTTGGGACCC
AGCGCTTTCCTTCTCCATCACGTGGCATACTTGGCATTATTTGTTGNTTAAATATTGCC
CTTAGTTTTNACCTTTCNTAAGGAGACACAAGGNNGACCTTTGNGACATTACAGTTGCC
CCAAGTNGGGGNANANANAANAATTTTTGGGGGNGNAAAAANCTTTTGGCTTTTNNAAA
AAATTTTTTTTTNAAANTTT

Sequence 1491

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGGTGACCCTTGCTGGT
GCTTTCATGTTTTGTGCCGAGGCAATTAGACTTTGTGCTGAATNTGTTTGTGCTGCCACC
TCAGGGAAGGGGTGGAATGTGCAGCGTGGTTTTCCATTTGACATTGTTTTCCCTGAGAGAT
GGGAGGGCTGAACGTTACCTCTTGACAAGTCTTAGTGGACAGAGGGGGCCCGGATACCCAA
GCGCCTTAGTTCTTAGGGCTGGGTATTAGTTCAATTTTCACTGCTGATAAAGACATACT
CGATACTGGGAAGAAAAAGAGTTTAATTGGAAGTCCACATGGCT

Sequence 1492

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTACCCTTTACTTTTTCCC

TABLE 1

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CAAGACCATCTCAGGGTGGAGCATTCTGTCTAAGAGAAGAAAGATAAGGAGGCTCCACC
CACCTCTCCCAAGAGCAGACATTAAACATCTTTGTGCTTTGAAGAGAGTGAATTTTGGAT
AGTCTTGTGATTCTCAGACTAACTTCCAGAATTATACTTTAACCCCTTCCAGATATGGTC
CGCCTTTGGCATTGTGTGTACCTGTGATGGGGCGTGTGGTTTCCGGTTGTCTCACCTTTA
ATTGTCAACCTCCAGTGTGACTCTAGAAATATGAGGAAAGCTTTTCAGTTTTTAAAT
GCCATTTAAATTTAGTCTATTAACAAACCTAGAGGTCTTGGTGCAGTTGATTTTCTAGA
GTTTATTAATTTAAGTGGTCCCAAAAGTATTACATCTTTTATATTCTGGAAGAAAAGAAC
TGTGAACAAATTAGA

Sequence 1493

CTATAGGGCGAATTGGAGCTCNC CGCGGTGGCGGCCCGCCGGGCANGGTA CTGTGGAGGT
CCCAGGAGTGCTGGTGATGGGCACAAAGTTCCGATGGGTGAAACCATTGACATAGAGACT
GCCTCTGTCCAGGAGGNANGGGCCAGCTCGATGATGCCATGGGTGAGTTTGTCTAGCTC
CCAGTATAGCTGCTCTGTCTGTCAGTCCAGGGTTTAGAGGGTCAAGGCGGTGAGTGCAGAT
GGTGTCCACGCCGGTGGCTGNCCCACGTTTTTCAGGCCTGAGCAAGGTCAGTNTGCAGCC
AGAGTACCTT

Sequence 1494

ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTA CTAAATTTGAATTTGTAATGA
GTCTGATGGTATATTTCAATTTTTTGTCTTGAGGGACTGGCTGCTACATTGCAGAAATATC
TTATATCCCTGACTGCTTTCCACTAAATGTCAGTGGTGACCCCAATCCAATTATTATGAC
AACTGAACATGCTTATGCATCCCTCATGCCTTTATTTTTTATTTTGGGAAATCTTTCAGC
TTCAGTTTTTGTCTGATATTTATGTGATTCTTTGTTCTGCAATTCAAATTTCTGGGAGCCA
AACAGTCTCCTTGGTTCAGATTACTGTTTTTGTCTAGAGCTTCTCGCTTCAGATTCTGT
CATAAGATTATGGCTTAACCTATGGTTGTCTTTGATTTGGTGCCATATGAAATAAAACA
TTATTT

Sequence 1495

GAGTCCCCCGCGGTGGCGGCCCGCCGGGCAAGGTACGCGGGGAGTTTCACGCGCGTATGC
TTTGCCCGCCATGGCCGAGTCAAGNGCCTTTGGAGTTCCATGCCAAGCGGTCTTGGCG
CCCCGAGGAGGCAGTAGAAGATCCGGACGAGGAGGATGAGGATAATACTAGTGAAGCCGA
GAATGGGTTCTCCCTGGAGGAAAGTGTTACGGCTCGGAGGCACCAAGCAAGGATACCTTA
TGCTGGCTACTTTGGATGAGAATGAGGGAAGTGATAGATGGAGGGCAAAAAAAGGAGCAA
TCCGATTGACCTTTNACCAAGGGGGGANTTTTTGGAAGCTTTTTTTTTTAAAAATTTTTNT
TTTTNGGNGAAATTTTTNAAAAAATTTTTTTNTTTNAAANNANATTACCCCCCTTTAA
AAAAAAAATTTNCCCCCAAAAAAAAANGGGNAAAAANANCCCCCAAAAAANAAAAAN
ATTAAAAAACCCCCCAANGNTTCAAGGGGCCCTTTTTTTTTTTTNGGGGNAAAAAA
AAAAAATTNGCCCCCNCCNCTTTTTTTGGGAGGAGAGGGGGGNCCCCCNCCCCCTTTA
AAAAAAAAGGGCCCCCCCCGGGGGGGGGGGNANTTTTANAAANTTTTTTTTTCCCCC
CCCC

Sequence 1496

CGGGCAGGACCATGGGAAATAAGAGCNGGCTNNNGGCATTCTGNGTANGGAGCCTGAGCC
AAACTCTAAAGCTGTCTTTATAAAGGGAGGTCATGTGATGGCCAGAAATTGCCTTTGCTT
CATGGTGCATTGGTGGGGAGTCAGGTGTGGGGTGTCTGGGTTTACATCATCCCATTTTC
TTTTNNGNNTTCAGACCTGCAATGCTTCTTTTGAACCCGAGACCGTCTGCGCTCCCACC
TGGCCTGTCTGAAGACAAGGTGCCCTGCCAGGTGTGTGGAAGTACCT

Sequence 1497

AGGTACTTTTNGAAGTAAGTGGACATGNNGGAGGNNAGGGGAANGGAAGTATTGNTATGG
ACTGAACTGTGCCCCAAAATTCATATGTNGAAGCCNTGAGCTCTGACATGATTGNATNT
GAAGTCCTAAAGCCAGGAATGAGGAAGGCTGTGAATGTNCATTGTTCCATGCAAGAATGA
CTCTGGNGNGGGCTATTTAGAGATCATGAGGGATACTGCCCCAGTTTCCACAGGCCAGAT
GGNCTCCAACAAAAGCCACGGGGAGTCACCCCTGCCTGGCAGATCTATCGGGTCAGGAC
CACCGCCCAGGGGGTCTTGAGAGGACAGTATAGGACCAAAGAGGAT

Sequence 1498

TABLE 1
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CACCGNGGTGGCGCCCGAGGTACTTGGCCAAGCGCTCAGATCGGCAAGGGGCACCAAGTC
TTGATCTGCCAGTGCACAGNCCCACAACCAGGTGAGCGATGAAGGTATCTTCAGTCTCC
CCCGAACGATGAGACACCATGACGCCCCAACCATTTGGCCTGGGCCAGCTTGCACGCCTGA
AGAGACTCGGTACCCGAGCCATTCTGGNTTGACTTTTTAGCAAGAAGGNANTTNAAGGA
NTTTTTTTTANCGNCTTNGGNAATCCTTTGGGGGTGGGGCNCNTGGGNGAAAACTCC
CCCCANCCNTNGNGATTCTTNCNNGNGGGNNGAAAAATTTTTGGNNAANTNNCCC
ATAANNTTTTTNGTGAANAANGGANTTTTTNANAAAAANCCCCCTGGGGTNTNTNTTTN
NNNAANAATTTTTNTCTTCNCGGGGGGNCNNTTTTATAAAAAANGANNANACC
CCCCNCCGTGGNGGAGAAAATNTTTANATTATTTTTTTCNTCCCCCCCCGGGCCT
TGGGGGGGGGGGCCCCCCANCCCTTTTTTTTTTTTTT

Sequence 1499

ACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCCGGGCAGGTACAGTTAA
TTTGTGTCATCCCATCAGCAATGAAGGTCCCTATCCAGGGTCTGCTTGGAGCAGCATT
CATGTTCTTTTGTGCTTTTGTGCTTTGCCGATTTTGGATTTTATTTTACAAAAATTTT
ATTTAAAAAACTCGTCACCTTTTGAAATGCCATTGCCGACTTGAATTTTTTGTATGA
AGTCCCTCCTGATTTTGTGTGTGTGTGTCTGTGTTAAGCAAGCGTTCGGTTGGTATAGN
TTTTTTTTGTTTTTTAATTTAAATTGAAGGTAGCTGCCTCCTGAAAGCCAGCATTAAAGC
CAGAACACCCAGNTTCAAGCAAAAGACCCACCTCTCTGCAGAGGCAAAGTCTACTTTCTG
GTACCT

Sequence 1500

CTTAGGGCGATTGGAGCTCCCCGCGGTGGCGGGCCGAGGTACTTTAGTAGAGACGGGGT
TCACCATGTTTGCCAGGCTGGTCTCGAACCCTGGCCTCAAGTGATCCACCCGCCGAGA
CTCCAGAGTGTGGGATTTAGGTGTGAGCCACTATGCCCGGCTAATACGTGGATTTT
TAAAGCTTCAGGTTCTGGTTCAGAAGTTTCTGGGTCTCATTAAAAATAGAGGCACTCA
GAATTGGTCTAATAAAAAATAACGACCATTCTTTCTACTTCAGCTNTTTCACAACTTTT
TTAATGAAAATGACAAGNGAGGNCCTTCAGTAGGGGCATTTTCAGGGGANAAAAATAGCG
GGNAGACCTGAAACCTGGGNTAGGNAGTTTNTTTTTATTTTTGAACAAGAAGANNAATT
TTTTCANAGACCCTAAAAATNTTTTCCAAAAACAAAAGNGNTTNTTTTTNTTTNG
GGNGGGACCCCTTCTTTTGGGNNTTTTNCCTTCCCCCT

Sequence 1501

CACTACTATAGGGCGAATTGGAGCTCNC CGGTGGCCGGCCCGCCCGGGCAGGTACGCGG
GGGCCACTGACCACAGCTCTTTCTTCAGGGACAGACATGGCTCAGCGGATGACAACACAG
CTGCTGCTCCTTCTAGTGTGGGTGGCTGTAGTAGGGGAGGCTCAGACAAGGATTGCATGG
GCCAGGACTGAGCTTNTNAATGTNTGCATGACCCCAAGCCCCACANGGAAAACCCCGCC
CCCGNGGACAATTTGTTTTNACCANGTTTCCCCNTTGGNNNNAAAAAATTCCTTTTTTT
TTTNCNNCCCCCNCNGGNGNCCCNAAAGGGGNNTTTTCCCCNTTTTTTNANTNNNC
CCCCCCCCCCCCGGGGGNGGGGNGGNCNCCCNCTTTTTNNNAANNANTTTTTTTTTNT
TNAAAAANCCNCCNNTTTTTANAANGGGGNTCCCCNNAATNTNGGGGCCNTTATCC
CCNGGGGGNTAAAAANAANTNTTNNCCAAAAAGGGGGGNCCTCCCCCTTTTNAAAA
NAGGGGGCCCCCCCCGNGGGGGGNGGAANTNATAAAANTTTTTTNCNCCCCC

Sequence 1502

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCCGGGCAGGTACATTCCAGCG
CAGTCTGGGCCCCAAAGCAGTTTCACTTACCTAACTTACCTAACTCTTAATATAGCCT
AAACTCACTGAAAAATAAGCTAATTCATTTACCTTTNGTAGCATACAGTAGACTCAG
AGTNTATACTGAAATATAATGGGAGGCTGTTATNAAAAAAACCNNCCCTCNAAAAAAA
AAAATNTNNNCNCTNAAAAAANNNNGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
GGTTTTTTTTNATNNTAAAAAATNNGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
TNNTNTNTTCCCTNNANTCCGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
NTCTNTNCTANNNCACNCTCCNANACCCGNNNNGANNNNAANATNNNTTNNAAATTAT
NNNNATTTNNAAAAAGNGGG
AANTANNATAGTNTCTNNNGNANNNTTNTNTNNNNANATNTNGGNNTNCNCCNNTN

TABLE 1

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CNTCTTNTTTATAAAANAAAAAA

Sequence 1503

CCCTCGCGGTGGCGGGCGAGGTGCATCACCCTGCTGAGGGACATCCAGGACAAGGTCACC
ACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTG
ACGATGGACTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCCAGC
CTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCC
ACCTACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACA
AGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATATTCC
CAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAGGAT
GCGCTCAACCAACTCTTCGAAACAGC

Sequence 1504

CCGGGCAGGTACTCTTGACAAAGCCTCCCCAACAAAGGTGAAATCACTCTCGGCTCACCAC
TGGTGGCAGAAATACTCTGGGCCTGTCTGTTCTGAATGGTCAGTTTCACTGTAATCCTCA
GGCCCTTCCAGTCACCCGTTGCCTTGGCAATGTCATCACCAACTTTTTTTGGAGACAGAC
CCAGGGGGCCCGATCTTGGGGGCCAGGGCAGAAGTTGGCACCAGCTTTNCCTTCCGGGNN
CCCCTAAGGTTAAANAACTTTTNTTTTTTTGGGGGNNNAAAAANTTTTCGGGCNNTTGGGGG
GGGGCCCTTTTNTTTTTTAAANNAACCCCCNNTTTTNGGGAAAAACCCNAAAGAAAAGTN
CCCCCTTGGGCCCCCCCCCNCCCAAAGGCCGNNAAAAACCCCGGTTTTTTTNGNGTT
TTTTAAAAAAAAGGAAANCCCCCGCNCNCGGGAAAAANTTTNTNANAANTTTTTTCCCC
CCCCCCCCNCGGGGGGGGGGCCCGGCCNCNNTTTTTTTTTTTTTTTTT

Sequence 1505

ACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCCGCCGGGCAGGTACATGGTGGTAA
ATGCTTAACTCCACCTATATAAAATCAAAACAGGCAAAATGAATCATCAGACTACAGC
TTACCTTTAGGGGGTGTGAGTAGTGACTAACAGGGGTCAAGATGAAGGTTAAGGATGTC
GCCAGGCGCAGTGGCTCAGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGCGGAT
CACTGAGGTGAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAA
AAATACAAAAAATTAGCCGGCGTGGNGGTAGGCGTCTGTNGTCCCAGCTACTCGGGAGG
CTGAGGCAGGAGAATGACGTGAACCCAGNAGGTGGAACCTTGCAGTGAGCCGA

Sequence 1506

CCGCGGTGGCGGCCGCCCGGGCAGGTACCATTTCTGCATTTATTTTAGCCCATGGAATAA
CTGTGCTGAGAAACCACAGAGTCAATCAGATTCAAATGTTAAATCCTTCCTGCTTGA
GTTTTCCGTCTTCACATCAAAGCATTTTCATGCCCGTCAGCACTTTTAAATGCATTTGCT
CCTCGTTTGCACAATTTCCATTTAAAGACTTTCTTGGCTGACTTCTCTGATGAGGTTTC
CTGCTTGCCAGGAGAGCACGCTAATGCAGAAATTACAAAGGGGGCTTCACGTCCCTTTTC
CGGAGGACCTGATATTTAGATAATTTCCAGCTTCAGTTTTGGAGAAACGACTGTTCTTT
GCACCAGGGGAAAATAAACTGATTTTCAGTGTAAAGCAACCTTTCTGCAAGTAGAATGGGG
ACTGTTGGGAATGGAGATGAAGACTTCACTTCATGTTATTTCATTTCTTAC

Sequence 1507

TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGGCCGAGGTACTTTTTTTTTTTTTTTTG
GTTAGGTTAACAGAAACAATGGGGTTATTTCCGGTAGTGGCAACAGCACGAAGTATTTT
CTTGTGGACTAATGGCCCGAGAGTTCCTGCGATTTGTGGATTATTTCCCTTAGATGCAAT
CGACCATTTGTTCCAATAAGAATTAATGCTACCACGGGGCTTACAAAGAACCCCTCAAG
TCTTCCAAATCTGCCCATGACATCAACCTNTGCTGCGTAATCGGACCTGCACCCAACCCA
GGTTT

Sequence 1508

CCGCGGTGGCGGCCGAGGTACGCGGGAGAACAGCTCAGAAGGAGACCCACAGTGAGCAGC
TCCCCTGTGTGGCGGGCAGGTGCTCCCTCAAGTGTTTCAGCTCTCAGCAGAGAAAAGGCC
CTGGAGAGGGTGACTCCTCTCAGCTCTCAGCAGAGAAGCAGCCCTGGAGAAGGTAGCTTC
TGTTGCGAGGCAGATTGTCCAGAGGTCCTGCTGCTCTCAGACGGGGCCCTGGAGAGGATA
GCTTCTATCCATAGGCAGG

Sequence 1509

TABLE 1
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CACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATAGCA
GTGGAAGCTGCAGAGGGCCGAAACAAAAATGAAGTTTTCTACCAATGTCCAGACCAAATG
GCTCGAAATCCAGCTGCTATTGACATGTTTATTATAGGTGCTACTTTTACTGACTGGTTT
ACCTCTTATGTCAAAAATGTTGTATCAGGTGGCTTCCCCATCATCAGAGACCAAATTTTC
AGATATGTTACGATCCAGAATGTGTAGCAACAACCTGGG

Sequence 1510

CTCCCGCGGTGGCGGCCGCCCGGGCNGGACTTTTTTTTTTTTTTTTTTTTTTAAAGAT
CCAGACTAAGACACATCAACAAGAAATTTCCAAATACCAGGTCAAGAATACTTCACATGT
TTCTGGAGGGAAAGAAAACAGTTCATATACAGNGAATCAGGAATTACAATTGCATCAGAC
TTATCAACAGCATCGGGAAGATAATGNGAAAATACCTTCAAACTCTNGAGGGACACAAG
AAGATGCTGCCTGGCCACAGGAGCGAGACTGCTGGCCTCCAATCAGTCTTNTGGGCAGGC
CTNTGATGCAATTACAGGGCTAAGGAACCACGGTAACCAATGTGCCATTGGCTGTGCTAA
AACCCAGNGGCCCCAGGAAGAATCCTGTTGACACTGGCTTGAACATGAGGCTTAA

Sequence 1511

CGACTACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAAGGTACTTTT
TTTTTTTTTTTTTTTTTTTTTGGCATATAATCCAGTTTATTAAATACAGATGATGGGC
CAGACATGGTGATAGAGAAATACAGATTAAGAAACCAGATCAAATCCTTTTTAAGGAATT
ATNTAGNGGAAAATATNTCAACTNTNTNTTTACNCTACTATTCAATTATCTTACACTTCA
AATCTTCACCTTTCCATTTTGACNGNCGCTNTTTACTTCAGNNTCCTGAAAACATNTTT
CCAACAGAAAGTTACATAAAAATNCTAATCTTCAAGGGGCTTTCTAAATATTTTATCATC
GTCATTAATAATCTTCTTCACTAGGCAANGGTTNTGTCTTTATGGGGGCTG

Sequence 1512

CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGACAGAAATGGAGTCATCAGTTTATCA
ACCAACAAGCAGCTCCAGCACCCAGCACTTCTAOCCTGAATTTCACCATCACCAACCTACC
ATATTCCCAGGACAAAGCCCAGCCAGGCACCAACCAATTACCAGAGGAACAAAAGGAATAT
TGAGGATGCGCTCAACCAACTCTCCGAAACAGCAGCATCAAGAGTTATTTTTCTGACTG
TCAAGTTTCAACATTAGGTCTGTCCCAACAGGCACCAACCCCGGGGTGGACTCCCTGT
GTAACCTTCTGCCACTGGCTCGGAGAGTAGACAGAGTTGCCATCTATGAGGGAATTTCTG
CGGATGACCGGAAATGGGTACCTCGGCCGCTCTANAAGTGGGATCCCCCGGGGCTG
NAAGGAATTTGATATCNAGCTTATCGATACCCGTCCGACCCTCGAGGGGGGGGGCCCGG
GTCCCAAGCTTTTGGTCC

Sequence 1513

NGGGGCCGCCGCCCGGGGCCGGNCAAGCAANGGGGGGCCAACNAAGGCNNGGNNNCC
CCNNGGGGGNANGGAAAAACGNGGGNAANCCCCGCGGCAACCAAAAGGGGNCCAACAACA
AAACAAGAACCGGGAGGCCCGGGGGGAGNCCANAAAAAANGGCGGCANAAAAGNCCCNNG
GGGGGGGGGGGCCCNAAAAAAGGAGGGNNGGGANGCCAAAAACCAGCNACNAANCAAAAN
GCGGCCCGGGGGGGCGGCCCAACCNNGGGGCCCAAGCCNNGGGCCAANNAAAAAANGGAAAAA
NNCGGGGCCCCCAACCCGCCCGCCGNGNGGGGAAAAGGAAGGGGGGCGGGNCCNCCG
CCGNAANNCCGGGGGGGGCGGCCCNCCGNGCCCCGCCNNNCCCNCCGCGGGCNAAC
CNGGGAACCNCGCGCCNCGGCCCGGCCCNCCGCGGGGGNCCCGNNNACCGGGANGNGNC
CGGGCCGAAGGCCGGGNANGCAAGCCGNCNAACNCCAAAAAAGGGGC

Sequence 1514

GTNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAAGTCTTNTAAATCTGGTGTGTTT
TTTACACTTGAGCACATCTCAAATGAAATAGCAACATTTACATGCACAAGACTCACAT
ATCTTCTGATGGCTATCTTGTGAATAGCACAAATTTAGGAAGTTCAAAAGGGGGAACAA
TTGCTTCTCAAATGATGAAGGTAGAGAAGAATGGTATCAGAGAACTGATTAAGCAGGG
ACCTGGGAATCTGAGTTGAGTTCCGGGGCATGTTTGTTCCTAGCACCATGACCTACATG
GCAGTGTCTTCTCATACTATTNTAAGAGTCCCTGG

Sequence 1515

ACTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGAGGCCAAGC

TGGACTGCATAAAGATTGGTATGGCCTTAGCTCTTAGCCAAACACCTTCCTGACACCATG
AGGGCCAGCAGCTTCTTGATCGTGGTGGTGTTCTCATCGCTGGGATGCTGGTTCTAGAG
GCAGCTGTACGGGAGTTCCTGTAAAGGTCAAGACCCTGTCAAAGGCCGTGCTCCATTC
AATGGACAAGATCGAGCGGCCGCGGGCAGGTACTTCATGAGACAAAATGAAAAAAGGAGA
ATTAATTAATAATGCACAACTAATATTTATCTACTACAGACATAATATTTCTCAGTTGTG
AACTAATTACTATGCTTGAAAAATGCTAGCATCCTCATAAATATTTTGGTTCTATTGGGA
TACAAAATCTGATTTGCAAACCTTGCAAAGGCACATTTT

CCGGGCACGGTACGCGGGGGCATTATCTTCACTCTGATGAGGGCTCAGACTTGATAACG
CCCGTGGTGCCCCATCCCTATAGGAGCTGGTGAGATTGCAGCCTGCTGCCTCCCCTCCAT
CAGCCACAGCTATTGGATTTCCACCCAGAATCTTTAGGTAATGAGGTAAGTCCTGATT
TTTAAACTTCTTTGAATCTGGAATCCAAACACCTGAGTGAAAGAGAAGCCTGCTTTA
AACTGGACAGATGAAACTAGAACAGACTCTTGAGACGGCTGGCAGGAAGTGAAGCTCAC
CTTACCTGGGCTTACCTCACTGGGTCAAATCAGAATTTTATTTTGGAGGGCAGGTTGGCT
ACTTTGGATATTATCTGNGAATTCCTGCATTGGCTGGACTTCTAATCTCTGNGAATTTA
AAAGCC

CCGCGGTGGCGGCCGAGGTACCTTTTAGTTATTGACAAGGTTAAAATAGCACTCTCAGTT
TTTCAGTATTACAGAGAGCAAATAGTTTCTCTCCTGCTCTGNGCAGTAGCTTTTCCAGA
ACTATGGACAAAATTNGATCAGAAAGAAGATTGATTATTTCTCATCTTTTTTCTTTT
TTTGAGACAGAGTCTCTCTNTGTCCCCAGGCTGAAGTGCAGCGGCATGATCTCAGCTCA
CTGCAACCTCTGCCTCCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTTCTGAGTAGCTGG
GATTACAGGCGCCGTGCCANCATGCCCGC

CCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTTCTTTCTTTCTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGCANNAAAAANCNT
NATTNCCATTNGGCCCAAGGCTTGTTAGGAAAGTAAAAAAGCCCCNATTGGCNGGNGG
GNNNGGCTTAGGCAAAACCCCTANTACTTTGCANGGGGCCCTCNAAAAAGCCCGNGGGCC
CNAAAAAGNCCTTAAANCCNCCNTGNAANAGGGCCCCCTTNAAAAAAAGCCCCNNNNN
NAAATTTTGNNGCCCCCCCCCGGGGGGGGGGGGGGGGGGGGGNGGCCCCCCCCCCCNTT
TNTNNAACCNCCNCCCCCCCCCNNAANGGGGGGGCCCCCNAAAAAAAAAANGGGG
GGGGGGGNNNGGCCCCCCCCCCCCCCCNAAAAAAAAAANGGGGGGNGGGGNTTTTT
TTTTTNCNCCCCCCCCNCCNNNNNNNNNGGGGGG

CCGGGCNTGGACTTTTTTTTTTTTTTTTTTTTNCCTTGCTTTGGTTTTTCCTTCGATA
TCTTCAAATCTGTGTCAGAAGAAAATGTGTTTCTGACTCCTGTAGTAGATTAATCA
GTTGGTATTTCTGGAGCTGCTATCATTTCTTATCATCTTCTGGAACACCTCAATGTCAG
AAATATATTCATATATTTACGTGGGTAAAATGGNGGCTTGCCCTCTTTCTTCTAAGACAA
TTCTCACGGNGGGCCAAGCGCCCTCCGGGTGCCCTCCAACTTNTAGAAGCTTCGCCT
CCGCCATTTTATAACTTACCTCCCCGGGTACCTN

CCGCGGTGGCGGCCGAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGTCACCACA
CTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCTGGTCACCAACTTGACG
ATGGA CTCCGTGTTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGACCCCAGCCTG
GTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGGCTCCACC
TACCAGTTGGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGC
AGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATATTCCAG
GACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAAGGAATATTGAGGATGCG
CTCAACCAACTCTTCCGAAACAGC

CCGCGGTGGCGGCCGCCGGGCAGGTACATCACCTGCTGAGGGACATCCAGGACAAGGT

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CACCACACTCTACAAAGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAA
CTTGACGATGGACTCCGTGTCGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCC
CAGCCTGGTGGAGCAAGTCTTTCTAGATAAGACCCTGAATGCCTCATTCCATTGGCTGGG
CTCCACCTACCAGTTGGTGGACATCCATGTGGCAGAAATGGAGTCATCAGTTTATCAACC
AACAAGCAGCTCCAGCACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATA
TTCCCAGGACAAAGCCCAGCCAGGCACCACCAATTACCAGAGGAACAAAGGAATATTGA
GGATGCGCTCAACCAACTCTCCGAAACAGCAGCATCAAGAGT

Sequence 1522

TACTATAGGGCGAATTGGANCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTT
TTTTGGTGGTAATTGAGCTGGGAAAAATTCAGAAATTGGGTCATAATTAATGGTAACTAAA
CAGATTTGNGAATATGGGACATCTGTGGNCTTGAAAACATCAGTATGATTTGNCCCCATA
TTTCTTCAGCCTGGACAATAGAAAACAGACAGGGGAGGGGGGTAAAGTGCANTAAAGTAGG
CTGAGTGATGTGGTGTCTAGCAGCTGGAGTCCAGAGAAGTTCTGACAGTGCAGGGAGCAGC
CCCTTTGTTCTTTGGAGCACTGGAAGGGCTGAGCTGCATCTGAGGTGTTCAAGCCACCAA
CAGGACAGGGTAGAGGACTAAGTAGCACATGTCCTCCAGAGCAGCTTCCTGTCTTGTGT
GGTCACATCACATCGGGGGAA

Sequence 1523

CGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTT
TTTTTTTTTTGCTTCTGGTAAAAAGAAGCATGTTACAATTTTCCCCCAATTCACATA
GGACTCTAAGAACATATTTTAAATCAGTGCTTCCATACAGGAACGAAATCCACTATTTTA
GAATTCTAAATCTTGTGAAAAGCAACCTTATCTGAAGAGTAAACAAGAAGATTCAAAGT
TAAGTATCAGTGCAGTCCAGAGCCCCCTAAATGAATAAACTGAATGTATCTTAAAAATAG
GATTTGCACACCAGTAAGAGACTTGTTCAGATTCTGGGGAGGAGGGAAGAACTGTAAG
AGGGAGAGAAAAGGGAAGAAAAACAAGAAGAAAAATAATNGGAAAAAAAAAAGAAAGA
AAGGTTTGTTTAGCTCAAAG

Sequence 1524

ACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTAATTGAGCTTAG
TGATATTAAGTGGTAAATTAAGCCAGTTTGTCTCTTTGCTTTATCTGTCTTGGAATC
TGTATCAGTGGAAATTAATAGTCTTTACATTTGATGAACCCTGTTTAGGTGTTGGAAT
ACCCATCTATTTGTTAAAAAGGCAAGGTCCCATGATTTAGTGAATGGGGGATACAGACAG
CCTTTATTCAAGTAACTGAATAAACAAAAGAATTAGAGAGTGTGATGAGTTTGAATAAAA
AATATAGNTCATAAAAACCAGAAATGTGATAGAGCATAGTGGCTGGAAGAAAGTTACCCA
AGTGGCTTGGGTAGTCAATGAAGTTGACTCCAACATGCAGTAGTACGCCGGGTCCTAAGA
TAGAGATTAAGTCATGGTTTAAATGAGGAACAATCAGTAA

Sequence 1525

CCGCGGTGGCGGCCGCCCGGGCAGGGTACACCACTGTGCCTGCTTTGAATCCTTTACGAA
GAGAAAAAAAATTAAGAAAGCCTTTAGATTTATCCAATGTTTACTACTGGGATTGCTT
AAAGTGAGGCCCTCCAACACCAGGGGGTTAATTCCTGTGATTGTGAAAGGGGCTACTTC
CAAGGCATCTTCATGCAGGCAGCCCTTG

Sequence 1526

GAGCNCCTCGCGGTGGCGGCCGNTGTACTTTTTTTTTTTTTTTTGGCTTNTAATTGGA
TGCCTGGAGACAATTCCATTTCAATTACCTTATTGGCATGACNAGATATACAAGGGCTGC
CAATGTCAATACATTAAGACTGAGCGTGCTGGAGCAGCAGCCAGGGTTCAGGGCACTGCT
GTGTCATCTGCGCCACGGTGCACAAAGGCAGNTTCAAAGCATTTCAGCATGATCGCTTC
CCTCTCTCCGCTCCTGGGAGAGAAGGATCCTGCACACCACAGGCAAATCATGCTGAAAT
TGAGNGNGNCCTTTGGGACTCCCATCCCATCACAGTCTTGGGAT

Sequence 1527

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTGTGGATATTGGTTGAACA
AACAGGTGGGCAAAGTGAGGAAGATAAGAAGTCCATCCGTTCAAGTTTCCCCACTGCGGAG
GGAATAACACTGTCTTTCCACAGGTCACAGACTGGGATGAGCAACGGGCTGAAGGCACGT
TTCCCGGAAGATCTGAACTGGCTGCATCTCCCTTTCCTGTCTCCTCCATCCTTCTCCCA

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AGATGGTGAAGGGGGACCTGGTNCTG

Sequence 1528

AGGTACGCGGGATGGCACATANGACATCAGCTAGGCTTTTGGGAATCGTTTGTGTTCTTT
GTGGAAATGTCTTTAGAAGCACCCATGAAGTAGTGTGTTTCACTGTGCACACAGAAAA
CAGGCTCTGCCTTCACATGTGAGACGGTGGACTTTTCTNTGGACAAAATGACAGCATNC
TGGCGACTCCACAGTGGAGCTGAGCGCCACTCCCTGTAGCCCGATCTGGGACTGAAACGC
TTACACCTCTGCCTTAGAAGGAGTCCCCCNTGCC

Sequence 1529

CCGCGGTGGCGGCCGCCGGGCGAGGGTACGCGGGGAATTAGTCCGAGTGGAGAGAGCGA
GCTGAGTGGTTGTGTGGTTCGCGTCTCGGAAACCGGTAGGCGCTTGCAGCATGGCTGACC
AACCTGACTGAAAGAGCAGATTTGCAGAATTTCAAAGAAAGCTTTTTTCACTATTTTGA
CAAAAGATGGGTGGATGNGAACTATTAACCAACCAAGGGAATTTGGGGAACCTGTAATG
AGGATCTTTTTGGGCCAGAATCCCCACAAGAAAGCAAGAAGTTTACCAGGGAACATTGAT
TTAATGGAAAGTAAGAATGCCTTGATTGGTTAAATTGGCACCAATTTGGACTTTCCCTTG
AATTTTCTTGACAAATGGATGGGCCAAGGAAAAAATTGGAAANGACCCAGNACCNGTTG
GAAGGAAAGGAAAA

Sequence 1530

CCGCGGTGGCGGCCGAGGTACGCGGGTGTCTTTTTGTTCAAAGTCTATTTTTATTCTT
TGATATTTTTCTTTTTTTTTTTTTTTGNGGATGGGGACTTGTGAATTTTTCTAAAGGTG
CTATTTAACATGGGAGGAGAGCGTGTGCGGNTNCANCCCAACCCGCTGCTNACTTTTCAN
CCNNTTTTCAACNGNCTNTGGGTTTTTAANACCCTNGGNTTTNTACCCCNNTCCTTTGNA
AANCCCTNNNCCNAANNNGNGGGGCAANANCCNGNGGGCCNCTANAAAAANANCTTGCGG
CCCTGTCCCCCGGGGTTTTGAGGACAANTTTNCCCAAAGCNAAAAAANAGANGTTTTTT
CNCCNTCNNTCCTGGNGGGGGGGGGGNGAAAAAANAAAAAANTTTTTTTTCCCN
GNNNNGGGGNGGNNNCTTNAAAAAAANAATGTCCCCCCCCCGNNNNNGTGGGCG
NNAATTTTNTTAANAATATTTTTNNCCCCCCCCCCCCCCCCCGGGGGGGG

Sequence 1531

ATAGGGCGAATTGGAGCTCCCCGCGGNGGCGGCGGAGGTACCATTCGGGTCTATCCGCGAG
AAATTCCTCATAGATGGCAACTCTGTCTACTCTCCGAGCCAGTGGCGAGAAGTTACACAG
GGAGTCCACCCCGGTGTGGTGCCTGTTGGGACAGACCTGAATGTTGAAACTTGACAGTC
AGAAAAATAACTCTTGATGCTGCTGTTTCGGAAGAGTTGGTTGAGCGCATCCTCAATATT
CCTTTTGTCTCTGTAATTGGTGGTGCCTGGCTGGGCTTTGTCTGGGAATATGGTAG
GTTGGTGATGGTGAAATTCAGGTAGAAGTGCTGGGTGCTGGAGCTGCTTGTGGTTGATA
AACTGATGACTCCATTTCTGTCACATGGATGTCCACCAACTGGTAGGTGGAGCCCAGCCA
ATGGGAATGAGGCATTCAGGGTCTTATCTAGAAAGACTTGCTCCACCAGGCTGGGGTCCA
AATTGGAG

Sequence 1532

TAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCGAGAAGGTCCCGGCAGCACGCACGGA
AGAAGACGGACCCCGCGATGAGGGCGGCGGCAAGGAGCACCTTCATGTTGCGTTCCGAGA
GGCGCAGCATCCACAGGCCCGCGTACAGACTGGTTTGGTAAATGCTAAACTTTTGTGTC
TTTTGCCTTTTTAAAGGAATTGTTAACATTGGAATTGAGGGTATGTACCT

Sequence 1533

AGGTTTTGGGCGATCGTTTTATACGAAATATTTGAGATGCTTTAGATGTGTGTGCATGT
CAGCTGCCACCTGAAAGAAAGGCCTCATTAAGATTTTCACTGATTAACCTTTTGATTGT
TCTTGGGATCTCAGATGGGAATTCACGCTGCTTGTGTCAGAGCTCTTGGGCTAAGTGAT
TTTCTTAATTACTGAGAAATGCGTGTATCAGTAAGCAGTGAAAAGTCTTGAAAAACTA
AGTAATTTTAAAAAANGTCCGCTGCCCCG

Sequence 1534

NCGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTT
TTTTTTTTTTTTTTGGNGGNGTTTTTCAATTTCTTCTGGACTGGTAATTTTACTTCT
GGCCTTGGTGGTCTTTGAGGGTCTACATCAGCCTNATCTTGTCCACTGCCAGCTCCTTGA

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GACTTTCTTTCTTGTCTAGGACCAGTTGAAGCTCATTATTAACCTGCTGCAGCTCCTCA
CCATTCTCCTCATCGGNGCCTCCATTTACACGAGCAGGGCGTGCCTGCTGCTCACTGTGA
TCCAAAATCTCCTNGACTTGCTCAGGGGCATNTGTAGCCTCC

Sequence 1535

CACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTGGTG
TTTTTGAAAAGTTACATTTAGATCTATTCTGAAGCTGTTCATTTTTAACAAATAAAAT
GTTACAGGTTTTCACATGATTTATTCGCAAAAAAAAAAAAAAAAAAAGTACTGTCTGTGA
ACAGCAAGGAAAATATGATTACACCTAAGAGATGAAATTGGCATAGGCGAGAAGTCAGAA
AAATAATCTATACAGCTTGCATGGTTGGGGAGTTAGGAGAGGCCAAGGCCACGTGCACGT
AGAGCAAGAGGTAGAAGAGGCCCGGGGCTAGAGCGCACCCCTGGTGGATAGTGTGAGAAT
TTCACACTGGCTCAAGCCTTGAAGACCACCCAGGGGTGCGCCTTAGCAACGCACCTTATG
CAAGACCCCAACAACCTGGCCCTTGAAGGAGCTTTTTACTGGTGGGATGTG

Sequence 1536

AGGTACTAATATCCCTTAATGGCAGAATGTGATAATCATGGAATTAATTATTGCTAAAGT
AGTTTTCAAATAAAAAAAAAAGAAAAAGAAAAACAAACAAATTAACCTTGACACAATCTGA
CCAAACACGTGTCAATTTACAATTTCAAGGTTATTTTACAAAATACCTACATTTACACAA
TAGGCTCCCGGCAGCATTTCAGACAAATGTTCTTTTAATTTATCCTGACATGCTATAAA
TGAATAAATTACACTATTTTAAAAATTATCATCAGTAAGTTTTCTTTCTCATGGGGGT
CAANAGCAAAAAAGAAAATNNAGGCNTGCCAAAGGAAGGATTTGGAGAGGGGAAAGCCGC
CACGCACCACCACTATAACCTTAAATAAACAGGGAGGGGGCTGGGGGGAGGGGGTCAAC
AAATTCACCTTGAAACCCTCACAACAAGTGGTGGATGCCTCTTCCAAAGGGGGGNGGAAAA
GGTTCAANCTTGGCTTTTATTAGGCCCANTTTCAAAAAAGGTATTTTTAAAGNAAAAA
ATGGTTTTTGGTANGGGGAAAAA

Sequence 1537

NCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTCAAACACCTCATGA
GGCTGGCCAGAGATGACACCACTGCCCGGATGCAAGGGGGCAGCCTTGCTTTGGACCCC
GTTCTGAATCTCAGGCTTCATCTATTAGGCACACTGAGCAGAAACACTCCTCCCTGCCAC
TTCCGAGTTGCAGCAAAAAGGGTCTAATATGATTTAAAGCAAATAATTTTAAACTTCAA
ATTTTCATTACTGTCACTTATGAGGACCAATAATGTAATGACTAAGACATCAAATTA
CATGTAATATGAATAAAACAGTAAGAAAATGATAGTTACTTATAATTGGATCAACATAC
AAAAAGAACGTCAATTTGGCCAAAGTAAACGGTTAAAAAATAGTGTCTATAAAATCACC
ATATAAAATCTTAGTATGTACCTGCCCG

Sequence 1538

CCGCGGTGGCGGCCGCCCGGGCATGGTACAAAACAAATTCAAAGGGTTAAGAATTTCAAG
TTGGTAGCTTCAGAGCATTAAAGCCCCAAATGTGGGGTCCCTTCTGAGCCCAGGATTATGT
GTGACTGCACTGGTCACATTGCCATGAAGCCAGCCCTGGTGGTTGGTAGAGGGGTGGGCA
CTGGACCTAAGCAGGGCCAATCAGAGCCATTCTGGAAATGGATATATAAATATTAGGAA
TGCAAAGTTATTTATTTTGTAGAGTTTGAACAACNGTGATCTGTAGAAAACAGTCACA
TTTCCTTAAGGATGCATNAATAAATATGAGCTAAATGTAATAATTAGAATTTGGTTTCC
AAGCAGATTCCATGCTCTAATTCCTGGATAGGTGAATATAATAAGATGATNTATCCNTG
AATAAGNTNCTTTTNCCTTTGCCCAAGGGGACANGATGGTAAATAAGGGCTACTAAATCAA
GTTGNCCTTTAAATAA

Sequence 1539

CCGCGGTGGCGGCCGCCCGGGCAGGTACAAAACAAATTCAAAGGGTTAAGAATTTCAAGT
TGGTAGCTTCAGAGCATTAAAGCCCCAAATGTGGGGTCCCTTCTGAGCCCAGGATTATGTG
TGAATGCACTGGTCACATTGCCATGAAGCCAGCCCTGGTGGTTGGTAGAGGGGTGGGCAC
TGGACCTAAGCAGGGCCAATCAGAGCCATTCTGGAAATGGATATATAAATATTAGGAAT
GCAAAGT

Sequence 1540

GTAATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCATGGCCCTTCCTT
TGAAATCATTTTTTCTTCCAGGCCCTTGCCTCCGGGCTGGGAGACAGAATGAGAGACA

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GCCCCAAGGATCTGTGATACACTTTCAGGGTCATTTTTTCTTGTCCTGCCAGTCCAGG
CACACCTTTTGTGTTCTCTCCTGAACATACTTTCTCATTTTTTCACAATATGGAAAGGCTG
ATAATTTTTCAAACCTTTAAGTTCTCTTTCTTTTGATTGACCATTTTGTCTTTAAATCA
TTTTTCTTCTCACATTTTATTATTATAAACATTCAAGGGAACCAAGCCATTATTTTGCT
TAGAAATTTATTAGCCAGCTGGGGCGGTGGTGGCTCACACCTGTAATCCCAGCACTTTG
GGAGGCCCGNGGTGGGGTAAGATCACCTGAGGTCAAGGAGTTTCGAGACCAGCCTGACC
AATAATNGGTGAAACACTTGNCTTNTACTTAAAAAATACCAAATTT

Sequence 1541

GGAGCTAAACCCCGNGGCGGCGGAGGTACTTACCCTCAATTTCAATGTTAACAATTTCT
TTAAAAAGGCAAAAGACACAAAAGNTTAGCATTTACCAAACCAGTCTGTACGCGGGGCCT
GTGGATGCTGCGCCTCTCCGAACGCAGCATGAAGGTGCTCCTTGCCGCCGCCCTCATCGC
GGGGTCCGNCTTCTTCTGCTGCTGCCGGGACCTTCT

Sequence 1542

CCGCGGTGGCGGCCGAGGTACACAAACGAGATGCTACCTAGGAGAAGGGTATTCTTTTCA
CTATTCTTTCAAATTTTCTGTATGTTTGAACATTTTCATAGTAGAAAGTTGGGGGGAAAA
TCTGTTTCATAAACATTTCTCAGCAGCAGTCCAGTCTATTGCATTTTAATTGGTTGTGA
TATCATTGTTTTATGCAATACGTTCTCAACAAGTATATCCTCCGGCAAACCTGAACAAGGA
CCAAGTCTGTTCTGCCTACAGCTCTGCTTCTCATAGCTGCTTCCAGAACGTGACTCTT
GCAAATTATCAAGAAAGGGGAACATAATCTAAGGGATCCCAGATCAACAGCCTNATGAAGA
CCTTAATTTATGNTTCTAANATAAAAGATAGGAAGTTTTCAAAAAAGCCCCTGCTTAC
ANAGGATCAANANCAGGGGGTGGGCCCTGCTGGGCTTNCAGTGGGATTTTTTGAGCATTN
CTTCCCNGGNGGCNCGNAAGGGGNGTGGNGTGAGCCCNAGGGNGGAAAAAATTT

Sequence 1543

CCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGCCAGCCCAATGCACAGCA
GTGGATATCATCTTTCTCAGAGTCCAGTATCACAGAATCACGACTTTGTCCAGCTGCAGG
TGCCTGCAGGTCACACTGGCTAACTACTTCTGTGATGGGCTCTTCTTTCTGAGGTTCTGC
CAACTTGTCTACTACATAGGGTTGATCATCCTGTTTCAAGAAATATTTCTTTTATTGCTC
TGAGCTTAATATTGTAATTTGATTTGATCTGCTGGGTCTTTGGAGTCAGGACTGGTTTT
ATCAAGCAGTTTGATCTTCTGAGGTCTGGTATTGTAGTTTGCTGGCCACAGAACCTTCA
CGTGTATTCACAGCCTCAATGCCATAAGGAAACTCTT

Sequence 1544

CCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGCCAGCCCAATGCACAGCA
GTGGATATCATCTTTCTCAGAGTCCAGTATCACAGAATCACGACTTTGTCCAGCTGCAG
GTGCCTGCAGGTCACACTGGCTAACTACTTCTGTGATGGGCTCTTCTTTCTGAGGTTCTG
CCAACCTGTCTACTACATAGGGTTGATCATCCTGTTTCAAGAAATATTTCTTTTATTGCT
CTGAGCTTAATATTGTAATTTGATTTGATCTGCTGGGTCTTTGGAGTCAGGACTGGTTT
TATCAAGCAGTTTGATCTTCTGAGGTCTGGTATTGTAGTTTGCTGGCCACAGAACCTTC
ACGTGTATTCACAGCCTCAATGCCATAAGGAAACTCTTTAAGAAGTTCTGACAGCTGGT
CATGTTAGGTATAAGAACAGGGTGCCTTATCACTGGTGGATTTTCAATTTCT

Sequence 1545

CGAGGTACTTTTTTTTTTTTTTTTTTTTGGGGAGTTTGTGTTTTTAACCAAATTATNA
TAGATGGAAGCATTAGGCAGCTGAATGTTTCAATTTGCCTTCANACATCATNTCCTATTTCA
TTTGCTNGNCTCGCATTAAAAAGAATCATTTATCAGCAAAAGCATATTTATTTGTTAA
ATGACAAGGTTTAGCTAGCAGAGNAGAGTTTGCNATGCTTTTAAANAATAACNTTTGAC
TTTTCTTCAAGACACTACAAAACATTTGTTCAAAAAAGGCTGCCAANGTCATTTANAA
GAATATTTTTCAAANGTCTATTTTNTATTTTTAAAAAAGTTCGCTTTTACCAATCTTTT
GGTTTTGAATTCACCTGGGCCTTTTCTTTTAACTTGAAAGGGCTTAAA

Sequence 1546

GGCGGCGGCCGAGGNACAAGNANCNNTTGGNGGAGGGGGGNGAAACCAANACCCGAACN
NGGGACTGNGCAGACAAGCTATATCTTAANCCCNCCGGGCCAGACCNCNAGCAAGGGN
GAGGAAGCAAAAGNCCACAGNNACNGGGGCAGGNAANNGGNANAAANGAGGGNGNGGGGC

TABLE 1
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NGGNTGCGGTGNTTACAGGGGGAANCCCAACACCCCGGGAGGNCGAGGCAGGAGGANGC
CCCGAGCCCAGGAGGNGAGACCAGCCNGGGCAACANGGNGAAACCCNGGCNCNACAAAA
AANACAAAAANNAGCNGGGCANGGNGGNNNGGGCCAGNGANCCAGCNANNNNGGGAGGCN
GAGGNGGGGAGAAANGCNGAGCCCAGGAGGCAGAGGNGCAAGNGAGCCCAAGAANGCGC
CACCGGAACNCCAGCCCAGGCAACAGAANGAGAACCCGGNCNCACANNAAAAAAAAAAAG
AAAANGAAAAAGAAAAANGNCCCGGGCCGGGCCGGGNCNAGAACCCANGGGGAAC
CCCCCGGGCNGCAGGAANNCCGAAANCAAAGCCAACNGANACCGGNCACCCCGNGGGGG
GGGCCNNGNACCCANNNNNNNNGGNNCCNNAAGGGGAGGGGNAANGGCNCGCCNGGNC
GNAACAAGGGGCAAAAGCNGGNNNCCNGGGGGGAAANNNGGNANNCNCGNCNCAANNCCC
NNNAAAAAACNAANCCGGAAGCAAAAGGGNAANNCCGGGGGG

Sequence 1547

AACACCACCGCGGNGGCGGCCGNCNGGGCAGGNACTTTNNTTNGGGGGNTAAAAACCCC
CCNAAAAAACNGGGCCCTAGNAGAAGGCAACNTTCATTNCAAACGAGGGGGCCCCNGCCCC
GNGAAAAACGGGGAACACGACGNCNAAGGCAGANCCCCGNAAGNACCTACNNNGGACAG
CCGGGGCAGGCGNGCAAANNNTTGGGCNNGGCCNCGCAAAGCACAAAGGGGGACACANA
ACCCACTGCCACGGCGCAGGAGAAAAAAGAAACAGCAAANCACGAGGGGACAN

Sequence 1548

CCGGGCAGGTACATCANTTNTGCTGAGGGACATCCAGGACAAGGTCACCACACTCTACAA
AGGCAGTCAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGACGATGGACTC
CGTGTGGTCACTGTCAAGGCATTGTTCTCCTCCAATTTGGACCCAGCCTGGTGGAGCA
AGTCTTTCTAGATAAGACCCCTGAATGCCTCATTCCATTGGCTGGGCTCCACCTACAGTT
GGTGGACATCCATGTGACAGAAATGGAGTCATCAGTTTATCAACCAACAAGCAGCTCCAG
CACCCAGCACTTCTACCTGAATTTACCATCACCAACCTACCATATCCCAGGACAAAGC
CCAGCCAGGCACCAACCAATTACCAGAGGAACAAAAGGAATATTGAGGATGCGGTGAGAAG
GGGGTGCTCAACCAACTCTTCGAAACAGCAGCATCAAGAGTTATTTTTCTGACTGTCAA
GTTTCAACATTGAGGTCTGTCCCCAACAGGCACCACACCGGGGTGGACTCCCTGTGTAACT
TTCTCGCCACTGGCTCGGAGAGTAGACAGAGTTGCCATTCTATGAGGAATTTCTGCGGAT
GACCCGGAATGGTACCTTNGGCCGNTTCTAGAACTAGGNGGATCCCCCGGG

Sequence 1549

CCGCGGTGGCGGCCGAGGTACGCGGGGCTTGATCTCTGGGGCCAAGGAGTGGTGGGTGA
GATCTTCCATGGCCCTGGCATGGGTGATATAAGCGGGACCGGTAAGGTGGTGGAGCTCTT
ACCAGACCCTGCANAACCCTCTCCGTGGTGTGAACTTCTGGAACAGGGGTGTTGCATG
TTTTCTCATAATGCAGGTTGGTGATGGTGAAGTTGAGGGTGAACGGCACCAGGAGAGGG
CCAGCAGTTGTGGGGCTGGGGAGGGAGGATGGAGTCCCTGACCCAAGGTCCACTGTGGAG
GTCCCAGGAGCTGAAAAAAGT

Sequence 1550

AGGTACTTTACAAACAAGTCTGAAAAAGGAGGGAGTAAAGTATGGAAGAATGATCTCTGG
ATGTTGCTACTGGCCTCAAAAAAGCAGTGCTACAGATTTCTGTGTGAAGAGAATACGCTG
TTCACACATTTTCCTATTTCCAGGCATGAAAATATTCTATTGGGTAGAAGAAATAGGAAA
ATCTCTTATGACAAATGAAAGACAGGTGCAAACACACCAATCCCTGTCTAGCAGTATAAA
GCATATTGGGCTCAGAATTTGTCTGTTGCTAGCACCTGGCTTTCATACTATATCCTTATC
AAATAATCAGATTGAAAGTCCAAATCATTCTTAAGCAAGCAAAAATCCTCAGTGGCCATA
CCTCA

Sequence 1551

GGCGGCCGCTCTAGAACTAGNNGGANCCNTTTTGCGGGGGGAAAAAAACCCCAAGCCANC
GANACCGNCGACCNCGAGGGGNNCCCGGNACCCAGCGNNNGCCCCNAAAGAGAGGGNN
AANNCGCGCNNGGCGNAANCANGNCANAGCNGNNCCNGNGNGAAANNNGNNANCCGCN
CACNTTTTNNNTTNNCNGACGAGCCGGGNGCANAACCCCAANANA

Sequence 1552

CCGGGCAGGTACGCGGGCTGCCTGGGGATGGCAGCCGCGTGCGTTCCCTGTGCTGCTG
TAGGGTTGTGGTGGCTTTCTGATATTCAGGTTGGTCCCTTTCTTCTTTTGGATGGGC

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TTTCGAGGTTGGGAGAGGAAGCTCAGGGATGGAAGTGAATAACATATGTGAGATGTTTC
CTTGTTTGCTGCTCATGGAGGTTTCATTTCTGAAGTCTTTCTTGGGAGGGAAAAGGATG
TGTGGATATATGAGGTGACTCTAGAACCCTCATTTTATGGATGAAGAACTGTGATTCAC
AGAGGGAGAGTGATTTGTCCAGTGTACGTGGGGAGCTGGCCGGGAGCCAGACCTCCTG
TACCTCGGCC

Sequence 1553

TACTATAGGGCNATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACATTTCCATG
GGCCCTGTTCCCATTTGATGTATACTGCTTCCTTACTAACAGTGAGGGATGACTTTCATCA
GTCTTTTATCACCTGAACAGTCTTCGGCCATAATGATAGTAAGTATAAGCTGATGCAGC
TGTGGTGAAAGCTGTAAAACACCTTTTATGGAAGAAAAGAAATAAATGTAGTTGTCAAG
TCTAAAAAATAGTAGCAACGGGAATCATAATGAATACATGCAATGAATTTAAATGTAAA
AATGAATTTAAAAAGTAAAAAGGGCTCTGTGGTGAATTTTCTTAAGTACAAGAGTCTA
AATACACTGCTTTTCTTTAAGAGTTCATTTAATTAGTAACGTCAAACAAAATTATTCTA
GATAATGAGCCCTACAAA

Sequence 1554

ATCGACTNCTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACGC
GGGTGGCCAGATTAATTTTCCAGCCAATAGAGGAAAGTTTTATATATTTTGTCTAAGG
TGCTGGAGAGGGGAAAGGATGCCACACTTCAGAAGCAGGAGGACGTTGCTGTGGCTGCTG
CAGTCTTGAGCCCCCTGCTCAAGCTGGCCCTGCTGGCCGGCCTGACCATCACTGTTTTG
GCTTTCCTATTCTCAGCTGGCTCTGGATATCTACGGAGGGACCATGCTTAGCTCAGGAT
CCGGTCTGTTTTGCTGCGTTCCTACTGTCTCTATGTTCTCCTGCTTGCCATCAATGGAG
TGACAGAAGTGTTTCACATTTGCTGCCATGAGCAAAGAGGAGGTGCACAGGTACCT

Sequence 1555

CCGCGGTGGCCCGCCCGGGCAGGTACAGCAAAAAAGAACTGAGAAGCCCAAAGTCTTT
CTTGTTAACATCCACTTATCCAACCAATGTGGAACTTCTTATCTTGGTTCCATTATGA
AGTTGGACAATTGCTGCTATCACACCTGGCAGGTAAACCAATGCCAAGAGAGTGATGGAA
ACCATTTGGCAAGACTTTGTTGATGACCAGGATTGGAATTTTATAAAAAATTGTTGATGG
GAAGTTGCTAAAGGGTGAATTACTTCCCTCAGAAGAGTGTAAGAAAAGTCAGAGATGCT
ATAATAGCAGCTATTTTAATTGGCAAGTGCCACTGTGGAAAGAGTTCCTGTGTGTGCTGA
AGTTCTGAAGGACAGTCAAATTCATCAGCATGGGGCTGTTTGGTGCAATGCAAAAGCAC
AGGTCTTTTTAG

Sequence 1556

ATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGTCCACATCCCGAAGGCCATAGCGTC
GAGCAAGGTCACATGGATGGCAGCACCTTACCCTCAGGCTCAGGATATTGGGATCTGTT
GCCAAAGCCACCACACATTTGCCACTCAATTCTGTGGTTTCCGCAGATGAGAAGGCTGAT
TTGAAGTGTCTCAACACAGGATCCTGCAGGACCTCCTCCTTTGCCATATGCTCCTTCAGC
AGTTCTGTCTGCACAATCCCCGGCCACAGAGACACACAGCTGACCCCATGGCGCCGCAGC
TCGTGGGCACAGTCAGCAGCCAGCTTGTCACACGCAGCTTTGCCACACCATAGGGGACA
TTGAACATATACTGCAGGCTTCTGCGGGAGGAGATGACCACGATNAGCCCCTGGCCAGCT
GGTACCT

Sequence 1557

CTACTTAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGT
CCTGGTGCTGCGGCCACACCACCTTGGGGTGCTCATTGACAGAGCTGCCATAATGAATT
GAAAGGACGGGAATCACCGAGGGAAGCTGGGGCTCCCCTGCCACAGGAGAGGATCCCCG
TTCTTCAAGCTTCTCTGCTCAGTGTCTACTAACGACCGACATTTGCTAATGTAAATAATA
GTAAATTATTGAGAATTCTAATTCTTTTACACAGTCTGTTTTTAATCTATTTTAATTA
TAAATCTATGACT

Sequence 1558

CCGCGGTGGCGGCCGGGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCT
GAGACTTCTGGAGAGACCATTCAAGGCTTCTGGCTCTTGACAAAGATAGACCACTGGAAC
CAATGAGGAAGGAGAGAATTCTACTGGTCACAGACAAGACTCTCTTGATCTGCAAAATACG

TABLE 1
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ACTTCATCATGCTGAGTTGTGTGCAGCTGCAGCGGATTCTCTGAGCGCTGTCTATCGCA
TCTGCCTGGGCAAGTTCACCTTCCCTGGGATGTCCCTGGACAAGAGACAAGGAGAAGGCC
TAGGATCTACTGGGGGAGTCCGGAGGAGCAGTCCCTTCTGTCCCGCTGGAACCCATGGT
CCACTGAAGTTCCTTATGCTACTTTCACTGAGCATCCTATGAAATACACCAGTGAGAAAT
TCCTTGAAATTTGCAAGTTGTCTGGGTTCATG

Sequence 1559

TACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTCCAGGCACAGCTAA
TTTTACTTTTTATTTCTTGAGACAGGTCTCACTCTGTTGCCAGGCTGGTCTTGAAGTC
TTGGCCTCAAGTGATCCTCCAGCCATGAGCCACTGTAAATGTCTGGGAATGCCAACTTGA
AGCCCAGCTGGTCAGAAGTTCTAGAGGCCAGACTTGCAACTGGTGTCTGAAGGGATGGC
AGTCTTGGGGACTGAGCCCTCAACCTGAGGGATCTGATGCTATTTCCAGGCAGATAGTGT
CAGAATTAATTGGAGGATACCGCAGTTAGTGTCTGCTGCAGAACTGATTGCTTGCTTGC
TGGTAGGGGGGAAATCCCCACATATTGGGGGGGTATTTGAAGTCTTTTGGTGTGACTCT
TACTGNGTTTNGTTGGTTTTTCATGTGAAGAGCAGAGGGAAAAGCAAGGGA

Sequence 1560

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTACTGACCCAACAAGTGTGACTA
GCTGGCCACGTCATTAGGGCTGGTGTGGCATTATGTGTGTGTGTGTGTGTGTGTGT
TTCTGTTTGGCCAGCAGTGCATTGTGGGTTCAGAGTGGGTAGTGTGTGTATGTGTGT
GTGTGAGAGGGAGACCTGGCAGGCACCTNTTGTAGAGTAGCTGTGGTCAGAGCTGTTTGG
TCAGTGCATTATGTTGAATGAGGTCCAGGAACCCAGAGCCACCCAGCAGACACCACTGTG
GCTTGCCAGCTGCCAAGATGGAGAAGCATGTGCCCTGTAGAGCGTCTTCCAGAACCCAG
ACCCCGAGCCACTCGCTTCTCTGTGCTGNGACAACATTGGTGCCAGGGGAGATNGTTNT
TTTTCAAAGGGGACCTACTGTAGCCCCTTTAAAT

Sequence 1561

CCACTCACTATAGGGCTGAATTGGAGCTCCCCGCGGTGGCGGCCGGAAGAGCAACCGAGA
TGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACT
TACAGAGAGCTTCAAGAACTATGATCCTGCTTACATCCTTTTGGGTCCCACTGAGAA
TATGTAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCT
TCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCT
ACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAAT
TGTATCCGTTACCT

Sequence 1562

GGGCGNGTTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCTTCTGCCTTCCCCCATATA
CTGAAGTTTGGAGAGCTGGGAAGGTGCGGAATGGGAAAAGGAGCAGCTGCTTATGTTGAG
TTTAACTTCTCTGGGTTTCTCCATCTAGGTCTTGAGTTCATTCTCTTCTGCTCTTTG
GCTTCTTGTTTAACTGGTCCCTGTTTCAGGAGAGAAGCCTCATCAGTGCCAAGTCTGT
GGGGAAGACCTTCTCTCAGAGTGGAAGCAGGAATGTGCATATGAGAAAGCATCACCTGCA
GCTGGGAGCAGCTTGGGAGTCAAGAGCAGGAGCAAACCTGCTGAGCCACTAATGGGGCAGT
AGTTTGCTTG

Sequence 1563

GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCTTCGTAAACCATGGAGAGC
CAGCCCAATGCACAGCAGTGGATATCATCTTCTCAGAGTCCAGTATCACAGAATCACGA
CTTTGTCCAGCTGCAGGTGCCTGCAGGTCACTGGCTAACTACTTTGTGATGGGCTCTT
CTTCTGAGGTTCTGCCAACTTGTCTACTACATAGGGTTGATCATCCTGTTGAGGAAATA
TTTCTTTCAATTGCTCTGAGCTTAATATTGTAATTTGATTTGATCTGCTGGGTCTTTGG
AGTCAGGACTGGTTTTATCAGCAGTTTATCTTCTGAGGTCTGGTATGTAGTTTGTGGC
CCACAGAAGCTTACAGTGTATTCACAGCCTCAATGCCATAAGGAACTCTTTTAGAAGTT
CTGACAGCTGGTCATGAGGTATAAGACAGGTGCCTTATCACTGTGGATTTCATTTCTTG

Sequence 1564

CCGCGGTGGCGGCCGAGGTACAAATTGTCGTTTTTATTCTCTTATTGGGATATCATTTT
AAAACTTTATTGGGTTTTTATTGTTGTTGTTTATCCCTAACCTACAAAGAGCCTTCC

TABLE 1

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TATCCCCTCGCTGTTGGAGCAAACCTTATACCTTACTTCCAGCAAGCAAAGTGCTTTGA
CTTCTTGCTTCAGTCATCAGCCAGCAAGAGGGAACAAAAGTGTCTTTTGCATTTTGCCG
CTGAGATATGGCATTGCACTGCTTATATGCCAAGCTAATTTATAGCAAGATATTGATCAA
ATATAGAAAGTTGATATTCAACCTCACAAGGGCTCTCAAAGTATAATCTTTCTATAGCCA
ACTGCTAATGCAAATTAACATATTTTCAATTTAACATGATTTCAAATCAGTTTTTCAT
ACTACCCCTTTGCTGGAAGAACTAAAAATATAGCAAATGCAGAACCACAAACAATTCGAA
TGGGGTAGAAACATTGTAAATATTTACTCTTTGCAAACCCCTGGTGGGTATTTTATTTTGG
CTTCATTTCAATCATTGAAGGTATATCTTATTGAAATGTACCTGCCCGNGCCGCGCCG
TCTAGAACTAGTGAATCCCCCNGGC

Sequence 1565

ACTACTATAGGGGCGAATTGGAGCTCCACCCGCGGTGGCGGCCGCCGGGCAGGTACTTT
TTGGTGTTTTTGGAAAAGTTACATTTAGATCTATTCTGAAGCTGTTCAATTTTAACAAA
TAAATGTTACAGGTTTACATGATTTATTCGCAAAAAAAAAAAAAAAAAAAGTACTGT
CTGTGAACAGCAAGGAAAATATGATTACACCTAAGAGATGAAATTGGCATAGGCGAGAAG
TCAGAAAAATAATCTATACAGCTTGCATGGTTGGGGAGTTAGGAGAGGCCAAGGCCACGT
GCACGTAGAGCAAGAGGTAGAAGAGGCCCGGGGCTAGAGCGCACCCCTGGTGGATAGTGT
GAGAATTTCACTGGCTCAAGCCTTGAAGACCACCCAGGGGTGCGCCTTAGCAACGCA
CTTATGCAAGACCCCAACAACTGGCCCTTGAAAGGAGCTTTTCACTGGTGGGATGTGGCC
CTGCTTGATTTCAGAACCATAGTTTTAACAAGCCANCATTAATCCACAAGTCTTTGCCA
AAGCACTTTAAGCCTNTTGACATTTATTGGAATTAATTTACCTGCAAGGAAAGTTTCATAT
ATCTAGCTTTGGTAACCCCTACATTCGGGAAAAATGTTTCCATGANATAACTAAAAANCCCC
ATGAATGATACAATCTTGACAAAACCCAAAGNNGGCATAATTAGCATAAACTCCAAAT

Sequence 1566

CCCGCGTCCGGCATCTCCCAACGTGACTGACCCGCCGACCACGACCCGCAAAGTGGTCCC
GACGACGCTCACCACCACCAAGCCGCCAGAAACCTGTGAGAGCTTCAACAGCTGTGTTTC
CTGTGTCAACGCCACCTTGACTAATAATATTACCTGCGTCTGGCTAGATTGCCATGAAGC
AAATAAGACCTATTGTTCAAGTGAATTAGTAAGTAATTGTACCCAGAAGACCAGTACTGA
CTCCTGTTCTGTAATACCTACCACCCAGTGCCAACCAATTCTACAGCTAAGCCTACAAC
TCGGCCTTCTCTCCTACACCTACTCCCTCAGTTGTCACATCAGCAGGTGCAACAAATAC
CACTGTGACTCCAACCTCACAGCCTGAGCGGAAGTCCACCTTTGATGCAGCCAGCTTCAT
TGGAGGAATCGTNCTTGTCTTGGGTGTGCAGGCTGAATTTCTTTCTCTATAAATTCTG
CAAATCTAAAAGAACG

Sequence 1567

TCGCCNCGCGTCCGGGCAACTGCAGTTGGAAAAAAGATTCAACTTCAAAGCAGAGGATT
TTTGATGAAGAACCAGCTAATGGAGTGAAGATAGAAAGGTTTACAAGGGATGATCCTTGG
TTATCTTCATGTGAAGAAGTGGATGATTGTAAAGACCAGTTGGAGAAGCAACAGGAAAAA
CAAGAGATACTTTTGCAGGAAGTGGCATTCACTCAAAGGAAAGCAGTTATTCATGAGAGA
GTCTGCAAAAGTGATGAACTGGGGAGAAGAGTGGTCTGAATTCCAGTCTATTTTCATCC
CCAGTTATACCCATAAGAAACCATTTTATAAACATGTATCACATGCTAAAAAATGGCAT
CTTAATGCTGCTGTAAACAGTCATCAGAAGATTAATGAGAATGAGACACTATATGAAAT
AATGGAATGTGGAACCCCTCAGAGCATTACCTTATTCAGTTTACAAGAACCTCAAA
CA

Sequence 1568

GCTCCATGCCCTTCTCTGAGACGGGGACCAGGGGATGGCAGNCATGCACCTGACAGCCTG
GCCCNAGAAGTCGGTGACCTTTGAGGACGTGGCTGTGTACTTCACCCAGGCGGAATGGGA
TGGCCTGTCCCCTGCACANAGGACCCTGTACAGGGATGNGATGCTGGAGAATTATGGGAA
TGTGGCCTCCCTGGGATTTCCACTTCTCAAACCTGCTGTGATCTCACAACCTGGAGGGAGG
AAGTGAGCTGGG

Sequence 1569

CGCGTCCGTTTCTCCTGGCACCCCTGTATTCATGGCCTTGGCGTTCTGCCTCTGCATGGCT
GAAGCCATCCTACTCTTCTACCTGAACACTCCCTGTTCTTCTTCTGCTCCCGAAAAGCA

TABLE 1
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CGGATCCGGCTCCACTGGGCAGGGCAGACCCTAGCCATCCTCTGTGCAGCTCTGGGCCTG
GGCTTCATCATCTCCAGCAGGACCCGAGTGAGCTGCCTCATCTGGTGTCTGGCACAGC
TGGGTGGGAGCCCTGACACTGCTGGCCACTGCTGTCCAGGCACTGTGTGGGCTCTGCCTC
CTTTGTCCCCGGGCAGCCAGGGTCTCAAGGGTGGCTCGCCTCAAGCTCTACCATCTGACA
TGTGGACTGGGTGGTCTACCTGATGGCTACAGTAACGGTGCTTCTGGGCATGTA CT CAGT
ATGGTTCAGGCCCAGATCAAAGGTGCGGCCTGGTACCTGTGCCTG

Sequence 1570

CGTCCGCTAAGTTCCAATATTGAAAAATCTGTAAAAGACCTCCAGCGCTGCACAGTGTCT
CTTGACGGTATCGAGTTGTAGTTAAAGAAGAGATGGATGCCTCCATTAAGAAAAATGAAA
CAAGCCTTTGCTGAATTGGAGAGCTGTTTAATGGATCGAGAAGTGCGCTTGCTTGCTGAA
ATGGACAAAGTGAAAGCTGAAGCAATGGAATTTTGTCTAGCCGACAAAAGAAGGCTGAA
CTTCTAAGAAGATGACTCATGTGGCTGTTCAAATGTCAGAGCAGCAA

Sequence 1571

GCAGCCGGCCATGCAGGCCGTCATCCGAAGTACATGGACCAAATTATCACCTCCAAGGA
GCACCTTGCCAGCAAGATCCGAGCCTTCATCCTCCCAAGGCAGAGGTGTGCGTGCGGAA
CCATGTCCAGCCCTACATCCCATCCATCCTGGAGGCCCTGATGGTCCCCACCAGCCAGGG
CTTCACTGAGGTGCGAGATGTCTTCTTCAAGGAGGTACGGACATGAACCTGAACGTCTAT
CAACGAGGGCCGGCATTGACAAGCTGGGCGAGTACATGGAGAAGCTGTCCCGGCTTGCGG
TACCACCCCTGAAGATGCAGAGCTGCTATGAGAAGATTGGAGTTCGCTGCGACTGGACG
GGCTGCAGC

Sequence 1572

CCGAACAANGTGGCCACCCAGGTTTTTAACCCAAGTCTAGTGGTCATCCTATTCTTTCCA
CACCAACATGCCAAAAGCCTTACCTNGAAAGAAAATATAATTTGCAAGAAGCATCACAGT
GCCGGGGTCTATATTCTCGATCAGGTTGNTAATTTTCCCATGGGTTTTTGA CT GATAAA
GNCATTGATCTGCTTCTGAGCCATTTCAAAATTCTGAAAGTTGGTAAGGATGGTTTCGGN
ACTGTAAAAGTTCTTGGCATCTTCC

Sequence 1573

CGCGTCCNGNCGGAGAAGACAGTAGGGATACTGGATATGGGAGGAGCCTCTCTCCAAAT
TGCTTATGAAGTTCCTACCTCAACCTCTGTCTTCTGCAAAGCAGGAAGAAGCTGCCAA
GATCCTGCTGGCTGAGTTCAACCTGGGCTGTGATGTGCAACACACTGAACACGTGTACAG
GGTTTATGTCACAACTTTTCTGGGTTTCGGAGGCAACTTTGCCCGGCAGCGCTACGAAGA
CCTTGTTCTGAATGAACTCTTAACAAAAACAGATTGCTTGGTCAGAAGACAGGTCTGAG
TCCCGACAATCCATTTCTGGATCCCTGCCTGCCAGTGGGACTCACAGATGTGGT

Sequence 1574

CGCCGTCCNGTTTACTTGGAGTGTCCAAAAGTCAAGCAGTAGAGAAATAAGACAAGCTT
TCAAGANNNTGGCATTGAAGTTACATCCTGATAAAAACCCGAATAACCCAAATGCACATG
GCGATTTTTTAAAAATAAATAGAGCATATGAAGTACTCAAAGATGAAGATCTACGGAAAA
AGTATGACAAATATGGAGAAAAGGACTTGAGGATAATCAAGGTGGCCNGTATGAAAGCT
GGA ACTATTATCGTTATGATTTTGGTATTTATGATGATGATCCTGAAATCATAACATTGG
AAAGAAGAGAATTTGATGCTGCTGTTAATTCTGGAGAACTGTGGTTTGTAATTTTTTAC

Sequence 1575

GAGGCGCTCAACCTACCGAGGCGCCACAACTGTCCGGCCTGCTGGGCTTGTCCCTGCG
CTACAACAGCCTCTCGGAGCTGCGCGCCGGCCAGTTCACGGGGTTAATGCAGCTCACGTG
GCTCTATCTGGATCACAATCACATCTGCTCCGTGCAGGGGGACGCCTTTCAGAACTGCG
CCGAGTTAAGGAACTCACGCTGAGTTCCAACGATCACCCAAGTGCCTTTCAGAACTGCG
CCGGCCCATGCCCAACCTGCGCAGCGTGACCTCTCGTACAACAAGCTGCAGGCGCTGCG
GCCCCGACCTCTTCCACGGGCTGCGGAAGCTCACCACGCTGCATATGCGGGCCAACGCCAT
CCAGTTTGTGCCCGTGCGCATCTTCCAGGACTGCCGCAGCCTTCAAGTTTCTCGACATCG
GATACAATCAAGC

Sequence 1576

GACCACGCGTCCGCGCACCGCTTCATTGAGGCTGCAAGAGCACACGGGCACCCACGTGCT

TABLE 1

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GGTCCACTGCAAGATGGGCGTCAGCCGCTCAGCGGCCACAGTGCTGGCCTATGCCATGAA
GCAGTACGAATGCAGCCTGGAGCAGGCCCTGCGCCACGTGCAGGAGCTCCGGCCCATCGC
CCGCCCCAACCCCTGGCTTCCTGCGCCAGCTGCAGATCTACCAGGGCATCCTGACGGCCAG
CCGCCAGAGCCATGTCTGGGAGCAGAAAGTGGGTGGGGTCTCCCCAGAGGAGCACCAG
CCCCTGAAGTCTCTACACCATTCCCACCTCTCCGCCAGAACCTGAGGG

Sequence 1577

CTACACTCAACTTCACCATCTCCAATCTCCAGTATTCACCAGATATGGGCAAGGGCTCAG
CTACATTCAACTCCACCGAGGGGGTCCCTTCAGCACCTGCTCAGACCCTTGTTCCAGAAGA
GCAGCATGGGCCCCCTTCTACTTGGGTGCCAACTGATCTCCCTCAGGCCTGAGAAGGATG
GGGCAGCCACTGGTGTGGACACCACCTGCACCTACCACCCTGACCCTGTGGGCCCCGGG
TGGACATACAGCAGCTTTACTGGGAGCTGAGTCAGCTGACCCATGGTGTCACCCAACTGG
GCTTCTATGTCTGGACAGGGATAGCCTCTTCATCAATGGCTATGCACCCCAAGATTTAT
CAATCCGGGGCGAGTACCAGATAAATTTCCACATTGTCAACTGGAACCTCAGTAATCCAG
ACCCACATNCTCAGAGTACATCACCCTGCTGAGGGACATCCAGGACAAGGTCACCACAC
TTTTACAAAGGCAGTCAAACTACATGACACATTCCGCTTCTGCCTGGTCACCAACTTGAC
GATGGACTCCGTGTTGGTCACTGTCAANGCATTGGTCTTCTCAATTG

Sequence 1578

GCGGCCGCCGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATTGNNNTNCAAT
AGNTTATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGGAGCTTCACAGC
TTCACCTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATGGCCTACCAAGA
CGATGATGTTTAGCCGGGCCGAGAGGCTGTACCT

Sequence 1579

CTCCCCGCGGTGGCGGCCGCCGGGCAGGTACCTAACCTACCTTTAAGACTGGGATNTCT
ATTGNTAACAATAGCTAATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGG
AGCTTCACAGCTTCACTTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATG
GCCTACCAAGACGATGATGTTTAGCCGGGCCGAGAGGCTGTACCT

Sequence 1580

CTCCCCGCGGTGGCGGCCGAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGT
AGGCCNTTNCCTACCACTAACTAATGTTCCGCACCCCATTTTTAAGTGAAGCTGTGA
AGCTCCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTC
CAATAGTTATCCAGTCTTAAAGGTAGGTTAGGTACCTGCCCCG

Sequence 1581

TTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTAACCTACCTTTAAGACTGGGATAACTA
TTGTTNAACAATNNCTAATACCGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGG
AGCTTCACAGCTTCACTTAAAAATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATG
GCCTACCAAGACGATGATGTTTAGCCGGGCCGAGAGGCTGTACCTGCCCCG

Sequence 1582

AGGTACAAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGNTAGGCCNTTACCCTACCAA
CTAACTAATGTTCCGCACCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTC
ATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCAGTCT
TAAAGGTAGGTTAGGTACCTGCCCCG

Sequence 1583

CCGCGGTGGCGGCCGAGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTTTTNGGC
CATTACCCTACCACTAACTAATGTTCCGCACCCCATTTTTAAGTGAAGCTGTGAAGCT
CCTTTCTATTACTCATCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAAT
AGTTATCCAGTCTTAAAGGTAGGTTAGGTACCTGCCCCG

Sequence 1584

TCTTCGANCACGNTTCGGGCGGCTTTTCCCCGGGCAAGGCTTCTAAATCGGGGGGGCTTC
CTTTTAGGGGGTCCGAATTTAAGTGGCNTATAACGGGCANCTTCGAACCCCCAAAAA
AACTTG

Sequence 1585

AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTNGGTAGGCCATTACCCTACCAAC
TAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCGG

[illegible]

AGGTACAGCCTCTCGGCCCGGCTAAACATCATCGTCTTGGTAGGCCATTACCCTACCAAC
TAACTAATGTTCCGCACCCCCATTTTTAAGTGAAGCTGTGAAGCTCCTTTCTATTACTCA
TCATGCGATAAATAACTATATCCGGTATTAGCTATTGTTTCCAATAGTTATCCAGTCTT
AAAGGTAGGTTAGGTACCTGCCCGG

CGGGCAGGTACCTAACCTACCTTTAAGACTGGGATAACTATTGGAAACAATAGCTAATAC
CGGATATAGTTATTTATCGCATGATGAGTAATAGAAAGGAGCTTCACAGCTTCACTTAAA
AATGGGGGTGCGGAACATTAGTTAGTTGGTAGGGTAATGGCCTACCAAGACGATGATGTT
TAGCCGGGCCGAGAGGCTGTACCT

TACNCGCGTCCGGGGCCCGGATGCTGGGGGCCACCAGGGCCCCGGGATGTGCTGGTCT
TCATGGATGCCCACTGCGAGTGCCACCCAGGTTGGCTGGAGCCCCCTCCTCAGCAGAATAG
CTGGTGACAGGAGCCGGGTGGTATCTCCGGTGATAGATGTGATTGACTGGAAGACTTTCC
GGTATTACCCCTCGAAGGACCTGCAGCGTGGGGTGTTGGACTGGAAGCTGGATTTCCATT
GGGAACCTTTGCCGGAGCATGTGAGGAAGGCCCTCCAGTCCCCAATAAGCCCCATCAGGA
GCCCTGTGGTGCCCGGAGAGGTGGTGCCATGGACAGACATTACTTCCAAAACACTGGAG
CGTATGACCCTCTTATGTCGCTGCGGGGTGGTGA AAAACCTCGAACTGTCTTTCAAGGCCT
GGCTCTGCGGTGGCTCCGTTGAAATCCTTCCCTGCTCTCGGGTAGGGCACATCTACCGAA
ATCAGGATGCCCCGTCCCCGTTTGACCAGGAGGCCACCTTGAGGAACAAGGTTGCGATTG
CTGAAGACCTGGCTTGGGGTCA

GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTGTGATATCCACATATTTTTGAG
AAAAATTCCCAAGCCAGGCGAATGTGGATTGGAATAAAGACATAGGCAGTGTATACCACC
ATAGCAATAATGGTTAGTAAGATGGTGTAAACATAGATCGCTCCCAGGGCTCTAAAAACA
GCACAGCAGCTAATGATTTGGTATTGATAGTAGAGCCAGGAGAAATATTCCTTCACACGC
CTCAAATCCATGGTTGGCTCCTTCAAGCTGCAGTAAGTTTGTCTAAGAAAGTCCAGGTC
TGGTTCTTCAGCCTTGCTCCTTC

CCCTTCGAGCGGCCGCCCGGGCAGGTACATTTTGAATATCAATTTCTAAATATTTACCC
AAAAATGTATATTTAAAGTTTTTAACAACCTCTTTTCAATCTTGAAAAAGTCCCTCATT
TTTTCTTTTTAAATCCCATAACAATCAATGTTGTTCTTTTTAAATAGAAATAAATATTTTT
TGTCATTATAAAGAAGAATATGGATCTTGGAAATCATTGAAATTTTTTTCTTAAAAAT
AGATTTTGTTTTTTTGTTAATTTGTTCCAGAAATAAATCTTCATCTAATAAAGTAACCTTGA

TABLE 1
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CCACCGTAAGATTTCATATAATCTAATCAAAGATCTACCAACTGGTTGTTTTACCCTGGAT
CCAGATTACCAATTAACCTAAAATTTTTCCTTGTGGATCTAAAATTTTACCGTTATC
AACAGCTTTGACAACCCAAANTTATTGGAAAAATATTTTTTAAGCTTTGAACTTTAAAG
GGTGGGTAACTTGCAATTA

Sequence 1592

CTACTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGG
GTTTCCCTGCTATGTTTTGTCACACATCATTGCTGGGAGAGTTCAGTGCTATCCAAGTGA
CTCCCCGGGGAGAGGACAACCTGGAAATTTATGCCTGGTGTCTTCTGGACTCCGACCTAT
GCACCTTTTTCTTGGATGATTTTAACTGTCTCCTTTTGTGCAATGAACCATAACCAT
GAGTATATCAGCTTTTCTAATTTTGTGAAGTCCCTCAAGTGAATTATCAAACCTAAGGG
TAGTTTTGGGGACCCCCATCACAGAAGAGGTCAAACAGGGGGCAGG

Sequence 1593

CCGCGGTGGCGGCCCGCCCGGGCAGGTCTCTGTCTAGTATACTCAAGGCAGCCTAGTAA
ATTATTATTTATCTATACAATACTGGAAAACTTGTAGACAAAAACATGACTTGAATTGC
TAAAAAAGAGGGAGAATGAAACTTCCGGACGCGTGGGTCGAAGCTT
GACCT

Sequence 1594

CCGCGGTGGCGGCCCGCCCGGGCAGGTAGGCTGTCTACACTGACATCATCCAGGGCAAGCT
GGACCAGCGAAACCAGCTGCTGGAAAGTGGATTTCTGCATTGGCCGTGACATCCGAAAGAA
GGATATCAATAATATTGTCAAGACCCTGCATGAATGGTGTGATGGCTGTGAAGCAGTTCT
ACTGGGCATNGAGCAGCAAGTTCTGAGAGCCAACCAGTACCT

Sequence 1595

CCGCGGTGGCGGCCCGCCCGGGCAGGTTTTTTTTTTTTTTTCTTTCTGTTTCTTGGACTA
GATAATCTGAAATCAACTGTCTTCACTTTTGCAGACTCTTGTGCCAGCTAAAATGTTCTG
TTGAGCCCCAGAAGCTAATTTTCTTTTCACTTATTATGATTTTCACTTTAGAATTTATT
TTTTAATATAATTTCTACCTCTTTTTTATATTCTCCATTTGGTGAGACATTCACATACT
TTCTTCCAGTTTTTTTAGACGTAGTTTCTTGAAGTTCTTTGAGCATATTTAAATAGTT
GATTTAAAGTATTTGTCTAGTTACTCCACCATCTGAGTTTCTCAGGGAAAATTTCTATT
GCCTCCTTTTTTCTGTGTGTGGTCCGNCCATACGGACGCGTGGGTGCAAGACCT

Sequence 1596

ACTTNNNTTTTTTTTTTTTTTTTTTAAAGCGCCCGGCATTTTCTAAATAAAATCATTT
TATTTGGNAAAAGGGTTTTAACAGNTATACCTTTCTAGCTAAAAGAAAAGAAATAGCGGG
ATGTACCT

Sequence 1597

AGGTACGAAGAGAAAGGAATCAAAGCCTACTANCTCAAAAAATTGTCAAATTGCAAATGA
GGACATCTAGAGAGGAAGAAAGGAAAAAGGAACTAAAAACAGAAACAATTAACAGTAA
GTTCTTAACATATCAATAATTATTTTAAAGTAAATAGATTAAATTATCTAATCAAAGAC
ATTGAATGGCTGAATGGATTAAAAACAAGATCAACTATACATTGCCCATCAGAGATTCA
TTTTAGCTTTAAGGATAAACTGTTGAAAGTGAAAAAGTCAAGGCTGGGCATGGTGG
CTCATGTCTATAATTCCAGCACTTTGGGAGGCCAAGGTGGGCAGATAATCTGAGGTCAGG
AGTTTGA

Sequence 1598

CCGGGCAGGTACCACCTGAAGACCCTCACACTCAACTTCACCATCTCCAATCTCCAGTAT
TCACCAGATATGGGCAAGGGCTCAGCTACATTCAACTCCACCGAGGGGGTCTTCAGCAC
CTGCTCAGACCCTTGTTCCAGAAGAGCAGCATGGGCCCTTCTACTTGGGTTGCCAACTG
ATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCCACTGGTGTGGACACCACCGGCACCTAC
CACCTGACCCCTGTGGGCCCGGGCTGGACATACAGCAGCTTTACTGGGAGCTGAGTCAG
CTGACCCATGGTGCACCCAAGTGGCTTCTATGTCTTGACAGGGATAGCCTCTTCATC
AATGGCTATGCACCCCAAGATTTAT

Sequence 1599

CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACACAGGACCAATGCTGCC

TABLE 1

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CATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGGCTCCAGACTTTGATGTCAGT
GGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATAC
TTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGTTTGGACTGGTCAAGGG
GAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTCGTGGTCCAAGTGT
AGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCCCCACGATCCT
GGATATTGCTGGGCTCGACACACCTCCTGATGTGGACGGCAAGTCTGTCTCAAACCTTCT
GGACCCAGAAAAGCCAG

Sequence 1600

TCNCCGCGGTGGCGGCCCGCCGGGCAGGTACGTTCACTGTCTCATATAATCNCAGCCTCC
TGTGTGATAGCTGGTGTCTCTCCACTTACAGATGAGGAAACTGAGGATAAGCAGGGTTG
AATAACTTGCTCGAGATCACAGAGCCACGGGTGGNGAAACAGGATACAAACCTGGTTCTG
TTTGACTCTAAGACCATTTCATNTTCTCTGAAACTCAGTATTGCACAGTGTAGAAATGC
AGTTTTTAAGACCTCCCAAAGTGACGTGCTGNGTCACTGCCCATCATTAGCTANATTGAG
TAAATTGCTGCTTAGCCCCANTTGTGTTTGACAGAATCAATAGCCCTTGCTGAGGGGCCAN
CAGCCTACGGACACAGGAGCATGCTTCATGGGCAAGACCACCATGCACACTCAGAGGGGA
AGCCACAAGGCAACCTCCACGCCACTTAAGATTTGTAGGGCTCTGAACACATCACCAGAT
ACAGACCACCTACTTATTTTTTNCCTGTAATANCAAAGGCAGGAATCTTTTTNCTGTAG
GGTAAAGTTTGGGGG

Sequence 1601

GGCAGGTACAAGGCCCCAAAGAGGAGGAATTCCTTGTAAGAGGAGCTTGTAAGTGGTCCC
CTCCAGCGGAGAAGCAGGCCAGAGAACTCCGAAGCGGGCCTCCGCCACTTTGAGAGTG
TATGAAACCGTCATGGTGCTGGGAGCCTGGGGCAGGAGGTCAAGAGTTGCCCCAGGG
CTGTCGTTTAGTTCTCCAGACAACCTCCCTTCACTCTGGTCTCCACACCCACGCTTCA
CCCTGCGTCAAGTGGACAAG

Sequence 1602

AGGTACCAGTGGGGACTTCTGAAAGAACNNTACTNGTGTGAGTGGAAAAGCTGGCATT
GGGAAATGCTGGTCTCTCTCAGTCCAGGAGTCAAGGAATATGTTGACTCTCTCTTAATTT
TTGTAGTCTCAGAGGAAACAGACATTGATGTGGAAACAGTTGTATGCCCCATGGTGGAGG
TGGTATCCATNGGAGCTGTGGCCTTGGTTTTTCTGAGTCAGCTAGGACAGAGGATTGTG
ACCCATGTCCAGAACTGGTGGTTTCCACATTAGTCGCTGCTGTGCTTGTGGAAGGATGCA
TGGCTTCTATAGCTGTGGTGTCTTCATCTGTTGTGAGTATCTCATGTGAGGNACCTGCCC
G

Sequence 1603

CCGGGCAGGTACTGTGATATCCACATATTTTTGAGAAAAATTCCCAAGCCAGGCGAATGT
GGATTGGAATAAAGACATAGGCAGTGTATACCACCATAGCAATAATGGTTAGTAAGATGG
TGTTAAACATAGATCGCTCCAGGGCTCTAAACAGCACAGCAGCTAATGATTTGGTATT
GATAGTAGAGCCAGGAGAAATATTCCTTACACGCCTCAAATCCATGGTTGGCTCCTTCA
GGCTGCAGTAAGTTTGTCTTAAGAAAAGTCCAGGTCTGGTTCTTCAGCCTTGCTCCTTCG
GAAATGATCCTGTGTGGGTTAGTTCTCCTCTCTGGGTTGCTGTTTCCTCA

Sequence 1604

AGGGCGAATTGGAGCTCNCGCGGTGGCGGCCGAGGTACCACCTGAAGGCCCTCACACTC
AATTCACCATCTCCAATCTCCAGTATTCACCATATGGGCAAGGGCTCAGCTACATTC
AACTCCACCGAGGGGGTCTTCAGCACCTGCTCAGACCTTGTCCAGAAGAGCAGCATG
GGCCCCTTCTACTTGGGTTGCCAACTGATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCC
ACTGGTGTGGACACCACCTGCACCTACCACCTGACCCTGTGGGCCCCGGGCTGGACATA
CAGCAGCTTTACTGGGAGCTGAGTCAGCTGACCCATGGGTGTACCCAACTGGGCTTCTA
TTGTCTGGACAGGGATAGCCTCTTCATCAATGGCTATGCACCCCAAAATTTATCAATCC
GGGGGCGAGGTACCTGCCCCGGGCGGGCGCTTAAACTAGGNGGGATCCCCNGGCTTG
CAGGAATTTGATATTCAAGCTTATCGATACCCGTCCNACCTTCGAGGGGGGGG

Sequence 1605

CCGGGCAGGTACCACNTGAAGACCCTCACACTCAACTTCACCATCTCCAATCTCCAGTAT

TABLE 1

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TCACCAGATATGGGCAAGGGCTCAGCTACATTCAACTCCACCGAGGGGGTCTTCAGCAC
CTGCTCAGACCCCTTGTTCCAGAAGAGCAGCATGGGCCCCCTTCTACTTGGGTTGCCAACTG
ATCTCCCTCAGGCCTGAGAAGGATGGGGCAGCCACTGGTGTGGACACCACCTGCACCTAC
CACCCTGACCCTGTGGGCCCCGGGCTGGACATACAACAGCTTTACTGGGAGCTGAGTCAG
CTGACCCATGGTGTCACCCAACTGGGCTTCTATGTCCTGGACAGGGATAGCCTCTTCATC
AATGGCTATGCACCCAGAAATTTATCAATCCGGGGCGAGTACCT

Sequence 1606

CGGCCGCCCGGGCAGGAACNNNTTTTTTGGGGGGGGGAAAACCNAGACGGAGCCNCGCN
CAANGGCCAGGCGGGAGTGNAAGGGCACCAGGGGGGGCNCACCACAAANACCGCCGCC
GGGNGAAAGCCACNCNCCGGCCNAGCCNCCGGAGNAACGGGGGGAACAGGGGCAGGCCA
TNTTTTTTTTTGNGGGGGGNGNANGGGGNGGANNCCAGGNAAAAANCANGCNGGCCA
GGGGGGGGGGGAACNCCNGACCTNATGANGCACCCGCCNNGGNCNCCAAAANGCGGGGA
NNANAGGGGNGAGCCACCGNGCCNAGCNGACGG

Sequence 1607

CGAGTTACCAGAAGGAGAGATCACCACCATCGAGATCCACCGCACTAACCCGTACATCCA
GTTAGGAATCAGCATCGTTGGCGGCAATGAGACGCCACTGATCAACATCGTNATTCAGGA
AGTNTACCGGGATGGGGCCATCGCCAGAGATGGAAGGCTCCTTGCCGGAGACCAGATTCT
TNAGGTCAACAAGTGTGATATCATGCAACGTGTCCATAACTACGCCCGGGCTGNCCTTT
CCCAGCCCTGCAGNACCCTGCACCTGACAGNGCTTCGGGAGCGGCNGCTTNGGCAGTCGT
GCAAA

Sequence 1608

CGAGCCTTTAGATGGCGTCTCCTCAGGGGGGCCAGATTGCGATCGCGATGAGGCTTNGGA
ACCAGCTCCAGTCAGTGTACAAGATGGACCCGCTACGGAACGAGGAGGAGGTTTCAGTGA
AGATCAAAGACTTGAATGAACACATTTGTTTGCTGCCTATGCGCCGGCTACTTNGNGGAT
GCCACCACCATCACAGAGTGTCTTCATACTTTCTGCAAGAGTTGTATTGTGAAGTACCTN
CAAAGTAGCAAGTACTGCCCCATGTGCAACATTAAGATCCACGAGACACAGCCACTGCTC
AACCTNAAACTGGACCGGGTCATGCNGGACATCGTGTATAAGCTGGTGCCTGGCTT

Sequence 1609

GCGTCCGACGTCCCCCAGGAGAATGGTAGACACAGATGAGGAAATTGTGGAGATGGGCAC
AAACCGCAAGGTGAAGAAAACGAACAAACACCGAGTTGATACGATAGTCCCCGTTCCCC
TGAGGGCCGACCCCGTGACTCCCGATGAGCGTCCAGTTGCGCCGGGCATCCCTGGGCCTC
CCAGCGTCTTTCCCGGAGGTTTCATCGCCGCACGGCGGAAAGCGCTCTCGGTTCCGCTTTC
CGGCCCCAGCCTCCCGGGCGCCCTCGCGCGGCGGCTAACGCTGGTCTCGGCCGGGCGCG
CTGACGTCATCGTGCCTCAGAGTGAGCCCGGATGGGGCGGCGGGCTTCGGGAGCGCCCGG
GCTGATCCGAGCCGAGCGGGCCGTATCTNCTTGTGCGCGCCGCTGATTCCCGGCTCTGCG
GAGGCCTCTAGGCAGCCGCGCAGCTTNCGTGTTTGTGCGCCCGCACTGCGATTACAAC
CCTGAAGAATCTTCCTATCCCTAT

Sequence 1610

CGCGTCCGGCGGGCGGGCTGAGGAGGGCCCGGCCTGCGAGAGCCTCAGTGGGAGCCGGC
TCAGCCCTCGGCCACCATGTGCGCGCCGTGCGAGGAGGAGGAGTACTGCGCGGCTGGTGA
TGGAGGCGCAGCCGGAGTGGCTGCGCGCCNAGGTGAAGCGGNTGTCCACGAGCTGGCCG
AGACCACNCGTGAGAAGATCCAGGCGGCCGAGTACGGGCTGGCGGTGCTCGAGGAGAAGC
ACCAGCTCAAGCTGCAGTTCGAGGAGCTCGAGGTGGAATGAGGCTATCCGCAGCGAGA
TGGAGCANCTCAAGGAGGCCCTTGGACAAGCACACACAAACCACAAGAAGGTGG

Sequence 1611

CGCGTTCGAGTCTGGAGACGACGTTNCGAAATGGCACCTCGCAAAGGGGAACGGAAAAGA
AGGAATGAACAGGTCATCAGCCTTGACCTCAGGTGGCTGAAGGAGAGAATGTATTTGGN
GTCTGCCACATCTTTGCATTCTTCAATGATACCTTTGTCCATGTTANTGAACTTTCTGGC
NAGTGAGTACTTCAGAAAGGCATNAAACANGCCTCAAAGGGAC

Sequence 1612

CCCCGCGTCCGCCACGCGTCCGGGCTCGGCTGCACCGGGGGGATCGCGCCTGGCAGACC

TABLE 1

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CCAGACCGAGCAGAGGCGACCCAGCGGCTCGGGAGAGGCTGCACCGCCGCGCCCCCGCC
TAGCCCTTCCGGATCCTGCGCGCANAAAAGTTTCATTTGCTGTATGCCATCCTCGAGAGC
TGTCTAGGTAAACCGTTTCGCACTCTGTGTATATAACCTCGACAGTCTTGGCACCTAACGT
GCTGTGCGTAGCTGCTCCTTTGGTTGAATCCCCAGGCCCTTGTGGGGCACAAGGTGGCA
GGATGTCTCAGTGGTACGAACCTTCAGCAGCTTGAATCAAAATTCCTGGAGCAGGTTACCC
AGCTTTATGATGACAGTTTTTCNCATGGAAATNNGACAGTACCTGGCACAGTGGTTAGAAA
AGC

Sequence 1613

GTTNAGTNGAAGTTCTCTACCATTGAATCAGTGAACCTAGAAAGATCTGATTTGGCCTGGG
ACCAAGTGTCAAGTTGGTTTGGTCTTTATTAATAAATCACAATATTCCGAAAACAAAAAA
CCTAGGAGATAAATGTAGAGGTATTGACTTTTCGTATCTTTTATCTTCACACTGAAACAA
GAGCTATCCTATTTGATTATTAAGTGAGCTATGTGTTAAGTGCCAGGACATTTCTAGCT
TTTGTGAGAATGTGTCTACATATGAGTATAATAAACCCACATGTATACACAATTGTCTCT
TATGTAATCCTACCTGGCAGGAGTCTTTG

Sequence 1614

CGCGCCGGTGGTGCATCTCGGCTACTGCAACTTCAGCCTCCTGGATTGAGGCAACACTC
CTGCCTCAGCCTCCACGTGGCTGGGATTACAGGTGCCTGCCCCATGGCTAATTTTTTG
TATTTTTGTAGAGATGGGGTTTCACCATGTTGGCTGGGCTGGTCTCACTCTCCTGACCT
CAAGCAATCTGCCTGTCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCC
CCCAGCCTGAGCCTTTTTTTTTTTCTAATGCATCCAAGGTTAAGGGGAAGACGCAATAA
CAGGACTATTCTAAAAGGAAACCTGTTTGAACCTCTGTGAGATCAAGTCATCAGTCTCAGT
ATTNCACAGGCACACCTTAATTTTATTGGTAAAAGATATATATTTTTGNCTATTTTTGN
GCTTTTGGGGGCCTATTTTNGCTTTTTTACCTTTAATGNAAGAAGANCTTAATACCAA
GTGGATTTTTTACCA

Sequence 1615

TCGCCNCGCTCCGTAGAACTCAGACTAGACACACGCAAGTAGTCATACGTCTTCACACG
GTTTAGGAGCTACTGGACCAACATTCTTGTTTTGCTTTTGTTTTTTAAATAATTCTAG
TCTGGAGCTAACTGTGGAGCAGCCAAATAGTAGCTGGCATGTTGATTCAAACCATGGGCT
GAATTTGCTCATAGGCTGTGCATCAGACAAAAGCTTGAATATTTGTGTTGTATGCTTGT
CCAACCACCGCTTGTGTGAGCATTTTTGTGGCTTGTACAGAAAGTACACTTTTAAATTGT
CTCTGCATCACTAAAATTTTTTAAATGAGCATAACAACGAAAGGCATCCAGCTGACT
TTTTGATTCCAAGATTATTGATTGGATTGACTTTTTTGCATTAAATTTTCCCAGCAAAA
TAAATCATATGGCGAGTCAGGGAATAAAAAAGTCAAAAAGGAAACAAATAGAAGCTTTTT
TTTTTAAAAA

Sequence 1616

GGNCGAGCGCGCCTTGCGGGGGCGGTATCCCGGCGCCCTAAGACCCACGACCNCNNGCA
CCGGCCGNTGCTGCNAGACCCCGGCCCGNGTCCGTCCGATGTCGCCCCCGGNCCCGGCG
GAAACGCCTCCCTNCTGGCCAGGCTGTTNAGCACCCGCTT

Sequence 1617

TCGCCACGCGTCCGTTNAGATGCAGAAATGAAAAAAAACACCTTTGTTTTATAAATATC
AAAGTACATGCTTAAAGCCAAGTTTTATCTAGTTTATTCTAGTACTTAGCTTGCCTGGA
ATAGCTAATAAATTATTCATGTATGTGCTTTTGAATAATCCAGAGCCCTATTTTACACAC
TTGTGTGAAGTTGGCAAACATTTTGAATAATGAAAAAAGTTTCTAATAATTGGGAACAA
TTACATTAATTAATATTTTGTAAAATATTGAAGCTTTTAGCCCTATGTCAATTTGTAGAT
TAAAAATAATTAATTATAGGAAAGGAAGATAACAGTGAGAAACCAACATTAC

Sequence 1618

CACGCGTCCGCCACGCGTCCGGCGCGGCGGGAGCGGGCGGNGCGAGCGGGAGGCGGCGG
CTCACAACCTGAAGCGCTGNGGCATGGNGCGCGCTGCCTCCAGGCCGANNNGTACCTNAT
GTTGCGCTTCAACCTGCTNTTCTGGCTGGGAGGNNGTGTGNGGGCTGGNTGTCTGGCNTC
CTGGCTTGGGC

Sequence 1619

TABLE 1

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TCGCCACGCGTCCGGACCTGGATGTGAGGGTGAANGGGCTGTGCTGCTGGGAGCCACATT
CCTCATTGACTACATGTTCTTTGAGAAGCGAGGAGGCAGCTGGGCCCTCTGCCATACCA
GTTAGAGGCCACCATGGTGTGAGGAGACCATCACCTCGACCAGAACTCCAGATGGTCACC
TGCCCTGGCCCCCTCCTCTGGGCAGCCCCCTTCTCCATGTACACTGCAGGGGACAGAAGG
GGGGCCCCATCCCTACCCTACTCCCTGGCCGCTGCCCCCTGTGGTTCCCAAGGAAGGGGG
TATTGTATTGAGAGCCGCTCTCCTGCTACCTCCCACCACTGTCCAACAGTCCCTCGGCAC
ACAGGCATATTAAGCTTTCACACTTTTCCCATGCACTTTTTTCCACCCC

Sequence 1620

GGAGTCGACCNCGCGTCCGGGGGCTTGCTGGGATCATGGCGGAGAATCACTGCGAGCTCC
TGTCGCCGGCCCCGGGGCGGCATCGGGGCGGGGCTGGGGGGCGGCCTGTGCCGCCGCTGCA
GCGCTGGGCTCGGCGCCCTGGCCCAGCGCCCTGGCAGCGTGTCCAAGTGGGTCCGACTCA
ACGTCGGCGGCACCTACTTCTCACCCTCGGCAGACCCTGTGCCGGGACCCGAAATCCT
TCCTGTACCGCTTATGCCAGGCCGATCCCGACCTGGACTCAGACAAGGATGAAACAGGCG
CCTATTTAATCGACAGAGACCCACCTACTTTGGGCTGTGCTGAACTACCTGAGACACG
GCAAGCTGGTGATTAACAAAGACCTCNCGGAGGAAGGG

Sequence 1621

GTCGCCCGCGTCCGGGGGCCCGGGGCTCGCCTCCGCCCTCCGCCACCTCGAGCTGCGG
TAGCAGCGACTCATGAGAGCGCGGCCGGAGGACAGATTTGATAATGGGCTGCATTAAG
TAAAGAAAACAAAAGTCCAGCCATTAAATACAGACCTGAAAATACTCCAGAGCCTGTCAG
TACAAGTGTGAGCCATTATGGAGCAGAACCCACTACAGTGTCAACCATGTCCGTATCTTC
AGCAAAGGGAACAGCAGTTAATTCAGCAGTCTTCCATGACACCATTTGGAGGATCCTC
AGGGGTAACGCCTTTTGGGAGGTGCATCTTCTCATTTTCAGTGGTGCCAAAGTTCATATC
CTGCTGGTTTAACAGGGNNGNGGTACTATATTTGNGGCCTTATATGATTATGAAGCTAG
AACTCCAGAAAGACCTTTCATTTAAGAAGGGTGAAAGATTTCAAATAATTAACAATACNG
AAGGAGATTGGTGG

Sequence 1622

TTCGGGAGTCGCCCCGCGTCCGCTTTTAGAAAAGGCCAATATACCTATCACACTTTGGAA
GTAAAATACACACTTTCTGTGTACCTAAAAAATCGTTGAAAATCAAGGCCAAAG
GTAGTGCAATTTTTTCATTAAGATTTAAAAAAGGGAATGATAGTCTTTGAAAGAAAAC
AGTAGGCATCCAGCACTGGACAAAACATGGGTATCAAAGATGAATAATCTTTGGAGATTC
TGGCAGTGTTCCTCCAGAACAAAGTCAAGTGGAAAGTGGAGAAATTATCTGTATAATTTTG
GACACATACAATGGCAGTTTATCAAAGGGTTTTGTTCTGTGGCCTGAATTTACTGGGGTC
CTACCTACACATTGAACATGTTTTGGCTGGCTTTTTTTTTTTTTTCAACTTGCCAGTTT
CACTTTACATGGTTAGTAATAAATGGTTTCCACGGGGTGAGTTGGGATAAAATTNTNAA
AACATNTTAAATTCCA

Sequence 1623

GGAGTCGACCNCGCGTCCGAGCCGGGCGGGGCGATGTGGAGCGCGGGCCGCGGCGGGG
TGCTGGCCGGTGTGTTGGGGCTGCTGCTGGCGCTGTTAGTGCCGGGCGGTGGTGCCGC
CAAGACCGGTGCGGAGCTCGTGACCTGCGGGTCCGGTGTGAAGCTGCTCAATACGCACCA
CCGCGTGCGGCTGCACTCGCACGACATCAAATACGGATCCGGCAGCGGCCAGCAATCGGT
GACCGCGGTAGAGGCCGTCGGACGACGCCAATAGCTACTGGCGGATCCGCGGCGGCTCGG
AGGGCCGGGTGCCCGCGCGGGTCC

Sequence 1624

CGCGTCCGGGGCAGCCGCGCCCGCGGAGTTTTCCGCCCGGCGCTGACGGCTGCTGCGCCC
GCGGCTCCCCAGTGCCCCGAGTGCCCCGCGGGCCCCGCGAGCGGGAGTGGGACCCAGCCC
CTAGGCAGAACCCAGGCGCGCGCCCGGGACGCCCGGAGAGAGCACTCCCGCCCACG
TCCCATTTCGCCCTCGCGTCCGGAGTCCCCGTGGCCAGATCTAACCATGAGCTACCTG
GCTATCCCCCGCCCCAGGTGGCTACCCACCAGCTGCACCAGGTGGGTGGTCCCTGGGGG
AGGTGCTGCCTACCCTCCTCGCCCAGCATGCCCCCATCGGGCTGGATTAACGTGGCCA
CCTATGCGGGGGCAAGTTCAACCAGGGACTATCTTCTCGGGAATGGCGGCCAACATTGTC
TGGGGACATTTGGAGGGAGCCAACATGCCCAAACCTGGACCCTGGGGCCCCTGGGGGCTG

TABLE 1

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Sequence 1625

CACGCGTCCGGCGCCGCTCCCGCATCTGCACCCGCAGCCCGGCGGCCTCCCGGCGGGAGC
GAGCAGATCCAGTCCGGCCCGCAGCGCAACTCGGTCCAGTCGGGGCGGCGGCTGCGGGCG
CAGAGCGGAGATGCAGCGGCTTGGGGCCACCCTGCTGTGCCTGCTGCTGGCGGCGGCGGT
CCCCACGGCCCCCGCGCCGCTCCGACGGCGACCTCGGCTCCAGTCAAGCCCGGCCCGGC
TCTCAGCTACCCGCAGGAGGAGGCCACCCTCAATGAAGATGTTCCGCGAGGTTGAGGAAC
TGATGGAGGACACGCAGCACAAATTGCGCGCGCGGTGGAAGAGATGGAGGCAGAAGAAGC
TGCTGCTAAAGCATCATCAAGAAGTGGAACCTGGCAAACTTAC

Sequence 1626

CCACGCGTCCGGCGGGGGGTGCCCCCGGGACGTAGCGCCGCGGAGAGGAAGCGGCAAAAG
GGGACCATGCGGCGCCTGACTCGTCGGCTGGTTCTGCCAGTCTTCGGGGTGCTCTGGATC
ACGGTGCTGCTGTTCTTCTGGGTAACCAAGAGGAAGTTGGAGGTGCCGACGGGACCTGA
AGTGACAGACCCCTAAGCCTTCGGACGCTGACTGGGACGACCTGTGGGACCAGTTTGATGA
GCGGCGGTATCTGAATGCCAAAAAGTGGCGCGTTGGTGACGACCCCTATAAAGCTGTATG
CTTTCAACCAGCGGGAGAGTGAGGCGGGATCTCCAGCAATCGGGCCATCCGGGACACTCG
CCATCTGGAGATGCACATGGCTTGGTGTATTGGACGGGACCTTCCACCCACTT

Sequence 1627

GCCACGCGTCCGCCGCCGCTTGCCCGTCGGTCGCTAGCTCGCTCGGTGCGCGTCGTCCC
GCTCCATGCGCGCTCTTCGTGCGGCTGCTGGCTCTCGCCCTGGCTCTGGCCCTGGGCCCCG
CCGCGACCCCTGGCGGGTCCCGCCAAGTCGCCCTACCAGCTGGTGCTGCAGCACAAGCAGG
CTCCGGGGCCGCCAGCACGGCCCCAACGTGTGTGCTGTGCAGAAGGTTATTGGCACTAAT
AGGAAGTACTTCACCAACTGCAAGCAAGTGGTACCAAAGGAAAATCTGTGGCAAATCAAC
AGTCATCAGCTACGAGTGCTGTCTTGATATGAAAAGGTCCCTGGGAAGGANGGGGGCTT
GTCCAAGCAAGCCCTACCACTCTCAAACCTTTACGAGACCCCTGGGNAGTCGNTTGGATCC
ACCACCACTCAAGCTGTACACCGACCGCACGGAGAAGCTGAGGCTGAATGGGGAGGGGCC

Sequence 1628

CCTAAGGGCAACAAGGGCGGTCTTGCCAGCCGGGCTTTGAGGGAGAGCAGGGGACCAGA
GGTGACAGGGCCAGCTGGTCCTGCTGGTCTCCAGGGCTGATAGGAGAACAAGGCATT
TCTGGACCTCGGGGAAGCGGAGGTGCCGCTGGTGCTCCTGGAGAACGAGGCAGAACCCGG
TCCACTGGGAAGAAAGGGTGAGCCCGGAGAGCCAGGACCAAAGGAGGAATCGGCAACCG
GGGCCCTCGTGGGGAGACGGGAGATGACGGGAGAGACCGGAGTTGGCAGTGAAGGACGCA
GAGGCAAAAAAGGAGAAAGAGGATTCCCTGGATACCCAGGACCAAAGGGTAACCCAGGTN
AACCTGGGCTAAATGGAACAACAGGGACCCAAAGGCATTNAGAGGCCCGAAGGGGA

Sequence 1629

AGTCGCCCCGCGTCCGCTGTGCCTGAAGGAGACTGGTTTTGTCCAGAATGTCGACCAAAG
CAACGTTCTAGAAGACTCTCCTCTAGACAGAGACCATCCTTGGAAAGTGATGAAGATGTG
GAAGACAGTATGGGAGGTGAGGATGATGAAGTTGATGGCGATGAAGAAGAAGGTCAAAGT
GAGGAGGAAGAGTATGAGGTAGAACAAGATGAAGATGACTCTCAAGAAGAGGAAGAAGTC
AGCCTACCCAAACGAGGAAGACCACAAGTTAGATTGCCAGTTAAAACAAGAGGGAAACTT
AGCTCTTCTTTCTCAAGTCGTGGCCAACAACAAGGAACCTGGAAGATACCCTTCAAGGAG
TCAGCAGAGCACACCCAAAACAACCTGTTTTCTTCTAAACTGGGTAGAAGCCTAAGAAAG
ATAAACTCTGCTCCTCCTACAGAAACAAAATCTT

Sequence 1630

TNCGGGCCTGGTGAGCACCGCCGAGGCGCGGGCCAGCTCTTCGAGGTTGTGCGCGGGAGT
GGCACGGCGGGCCGGGCCGAGCGAGGGGCTAACTTCAGCGGTGGCACCGGGATCGGTTGC
CTTGAGCCTGAAATCATGACCACCCAGGAAAAGAGAACTTTCGCCTGAAAAGTTACAAG
AACAAATCTCTGAATCCCGATGAGATGCGCAGGAGGAGGGAGGAAGAAGGACTGCAGTTA
CGAAAGCAGAAAAGAGAAGAGCAGTTATTCAAGCGGAGAAATGTTGCTACAGCAGAAGAA
GAAACAGAAGAAGAAGTTATGTCAGATGGAGGCTTTCATGAGGCTCAAGATTAATAACAT
GGGAGATGGCCAGGGTGGGTGTCATCACTTCTGACATGATTGAAATGATATTTCCAAA

TABLE 1

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AGCCCAGAGCAACAAGCTTTCAGCAACACAAGAAATTCAGGAAGCTGCTTTCAAAAAGAA
CCTAA

Sequence 1631

CGGAGTCACCACGCGTCCGGGGCTGCCAAGGGAGGAGGAAGATGGCGGCGGGGGCGAGGT
GAGGTGTTGGCAGTGGAAGGGGTTCCGGGCTCGGGGGGCGGGGGGACGCGGAGCGATGGC
CCGCGCCGGCCGAGGGGCGGATAAAAAGCCGTCGCGCTGCGGGAGTGGGCGGGAGGGAG
AGGGGGTGTCCGAGGGCCACAAGAGTATGACGGGGCTGTACGAGCTGGTGTGGCGGGTGC
TGCACGCGCTGCTCTGTCTGCACCGCACGCTCACCTCCTGGCTCCGCGTTCGGTTCGGCA
CCTGGAAC TGGGATCTGGCGGCGCTGCTGCCGCGCCGCTCTGCGCGGTCTAGCGCCGC
TCGGCTTCACGCTCCGCAAGCCCCCGGAGTCGGCAGGAACCGCCGTCACCACCGGCACC
CGCGCGGGGGGGTCTGCTGCTGG

Sequence 1632

CGTCCGTTTGTTAATATTTTTTCTCTCTTGAACAAAAC T GAGATAATTTAGAAAACA
GGTGCTTAATTGCAATAAAATTACTATGAAGTATATTA AAAATCACGACATTGTA AAATC
TCACTTTAGATCATCAAAGAAAACCATTTGTTACTATCTCCTTTGAGCTTAGGAAAATGTA
CAAGAGAACAAAATTA AAATTGAAAATTGATTTCACTTAGAAAACTTCTAGGAACAGGG
TGAACCACTGATTTTAATTTGCCTAATTATCTTATGACAAGTATCAAATTAAGATGACAC
TTAAAGGATCCTTAGCATTTAACTTAATGATGGAGAAAGAGTGCTCAATAGGACAGTTCC
CCAGTTAAGGGGTAATGGAGATGCCATTTTCAGGAGGACCATTCTAAGAAGATATTTTT
GGATTCAATTA AAAACATTTAAATAAAAAGCCCTTCTTCAAGATTGGGAAC

Sequence 1633

CGCGTCCGCCCGGCTGGTGCACGCGCGCACCGAGGCCTCCCGCAACGCCGCCGACAAGG
AGCGGGCGGCGGGCGGCGCGCCGGCAGCAGCGAGGACGACGCGCAGAGCCGCCGCGACG
AGCAGGACGACGACGACAAGGGCGACTCCAAGGAAACGCGGCTGACCCTGATGGAGGAAG
TGCTCCTGCTGGGCTCAAGGACCGCGAGGGTTACACATCATTTTGAATGACTGTATAT
CATCTGGATTACGTGGCTGTATGTTAATTGAATTAGCATTGAGAGGAAGGTTACAAC TAG
AGGCTTGTGGAATGAGACGTAAAAGTCTATTAACAAG

Sequence 1634

CCCCGCGTCCCGGTTGGCCGGGCGGAGGTCTTCGCTGAGGCCCGGGGCGGGGTGGCGCCA
CCCCTGATTGCGGTGCCACGGA CTGCTCCTGCTGGGCGGAGAGGACAGATTTTGCAAAGC
GGAGGCTTGCGACGGGTCTGCAGGGGGACAGTGAGGAAAGGGCCCGCCTCGTNTCCGCT
CCTGGGGGACCCGAGAAATAAGAATCAAAC TCCACAATGACAACCTATTTGGAATTCAT
TCAACAAAATGAAGAACGAGAATGGGAGTCCCGATTAGT

Sequence 1635

CCACGCGTCCGGGCGGGGCCATCCAAGCAACGCTGAAGGCCTTTTCCAGCAGCTGGGAGC
TCCCGGATTGCGTGGCACAGCTGAGGGGCCTCTGTGATGGCTGAGCTCTCTTATGTCCTA
TACTCACATCAGACATGTGATCATAGTCCCAGAGACAGAGTTGAGGTCTCGAAGAAAAGA
TCCATGATCGGCTTTCTCCTGGGGCCCCCTCCAATTGTTTACTGTTAGAAAGTGGGAATGG
GGTCCCTAGCAGACTTGCCCTGGAAGGAGCCTATTATAGAGGGGTTGGTTTATGTTGGGGA
GAATTGGGCCTGAATTTCTCCACAGAAATAAGTTGCCATCCTCAGGTTGGCCCTTTCCCA
AGCACTGTAAGTGAGTGGGGTCAGGCAAAGCCCCAAATGAGGGGTTGGTTTAGATTCTGA
CAGTTTGCCAGCCAGGCCCCACCTCAGCGTCTGTGCAACAAACAAAGNTNGGGNGGGTTT
N

Sequence 1636

CCNCGCGTCCGCGGACGCGTGGGCGGACGCGTGGGCTTCTGCAGCAAGCTCAGGAGAGCT
GCTGTCTTCCCTCCCGCCCACCAGCAACGCACCCCTCTGACCCTGCCACAAC TACTGCAAA
GGCAGACGCTGCCTCCTCACTCACTGTGGATGTGACGCCCCCACTGCCAAGGCCCCAC
CACCGTTGAGGACAGAGTCGGCGACTCCACCCAGTCAGCGAGAAGCCTGTTTCTGCGGC
TGTGGATGCCAATGCTTCTGAGTCACCTTAAC TTTGAACCATTCTTTGGAATTGGCGTGG
TATATTTAACCACGGGAGGCGTGTCTGGAAACGCAAAC TATCATTATTTCACTAGGT
TTGTACCGTATCTGTAGGCATTCTGTAAATAATTCCAAGGGGGAAAAC TAAACNNGGGAC

TABLE 1
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GTGGGGTTGTATCCTGCCAGGTTTGAGTGGGGGCTCACACCTAGGGTGAGAAGTCAGAAA
GCGCTTGATTTTTAAACAACCAAAAAGAATTGAAAGGGTG

Sequence 1637

CGTCCNATAGGCTTGACACTTTTCTAACTACATGTTAAGTGGCAGAGTCCAGGCTGTC
GAGTCACGGTTGGGTTTGAATCTGACTCCACCAGTAACTTTGGTTGGAAAAATCACTTA
TCCTCTTTAAGCTTGATTTTATTTATTTTATGTAAGAGTGAGACAGTAGTAGCTT
AATAGGGTTGCTTTTAAATTAGAGTGAACATGAGGCATTTATTGCGTGCCAGACAGATAA
CTGCCTATAACAGGATGTGATCAGCACAAAGTAACAGAAAATTAGCCTGGACGGTGGCTTA
AGCAATGGGGAATGTTTATCTCACATAGCAAAAAGGTCTGTAAATAGGATGGTTTTAGAG
TTGGGGTGGGGAAGCCAAAAATGTCATCAGGATTTCTTGGAACCCGT

Sequence 1638

CGCGTCCGGATTAATACAACCTCTTAAAAATATAGTCAATAGGTTACTAAGATATTGCTT
AGCGTTAAGTTTTTAACCGTAATTTTAAAGCTTAAGATTTTAAGAGAAAATATGAAGAC
TTAGAAGAGTAGCATGAGGAAGGGGAAGAAAAGAAGGGGAAGAAGATCAAAGAAGGAAAG
AAGAAGGGGAAGAAAAGAAGGGGAAGAAGATCAAACCCACCATGCCCCAGGCTCAGCAG
GGAGCTGCTGGATGAGAAAGGGCCTGAAGTCTTGCAAGGACTCACTGGATAGAAGTTATTC
AACTCCTTCAGGTTGTCTTGAAGTGAAGTCACTGATGCCAGCCCTACAGAAGTGCCTTTTA
CGTATTGGAGCAACAGCCGTGTTGGCTTGGCTGTTGACATGGATGAAATTG

Sequence 1639

CGCGTCCGGCTCCCCGCACCCCTCGCACTCNCTCTGGCCGGNCCAGGGCGGCCTTCAGC
CCAACCTTGCCCAGCCCCACGGGCGCCACGGAACCCGCTNGATCTCGCCGCCAACTGGTA
GACA

Sequence 1640

GTCGCCACGCGTCCGGCGGCCGGGCGGGCAGCCGGGAAGCGGGTGGGGTGGTGTGTTA
CCCAGTAGCTNCTGGGACATCGNTCGGGTACGCTCCACGCCGTCNCAGCCACTGCTGTGG
TCGCCGGTC

Sequence 1641

CGTCCGCTCCTCCCGCTGAGGCGAGTCTGGGCTCAGCCTAGAGCTCTCCGGCGGGCGGC
CAGCTTCAGGGCAGCGCGGGCTGCAGCGGCGGCGGCTTAGGGCTGTGTAGGGCGAGGC
CTCCCCCTTCTCCTCGCCATCCTACTCCTCCTCCTCGTCATCCTCCCCCTTCGTCTC
CTCGCTTCTCCTCCTCGTCAGGCTCGACCCAGCTGTGAGCGGCAAAGATGGGCGGCGC
CCAGGCCGCCGCTGCCAGGCTGTGCGGGCGTCATGGTGCCGGCGCCCATCCAAGACCTG
GAGGCCCTGCGCGCGCTCACGGCGCTCTTCAAAGGAGCAGCGGAACCGAGAAACAGCACC
CAGGACTATCTTCAAAGGAGTTCTGGATATCCTAAAGAAATCTTCTATGCTGTTGAGC
TTGCCTGCANGAGATCCATCCCAAGTGGAACCT

Sequence 1642

ACATTTATCATGGATGCTGACCGGGAGAAAGAAAGAAAGAAACGGGAGGAGCGGGAGCGT
AAGCGGCGGAAGGAGGAGGAGGTGCAACAGCCAAAGTTGGCAGAGGAGAGACGGCGGCAG
AATTTACAGGAGGAAAAGGAAAGGAAGTTGGAATGCCTGCCCCCTGAACCTTCCCCTGAT
GACCCTGAAAGTGTCAAGATCATCTTCAAATTACCTAATGATTCTCGAGTAGAGAGACGA
TTCCACTTTTACAGTCTCTAACAGTAATCCACGACTTCTTATTCTCCTTGAAGGAAAGC
CCAGAAAAGTTTCAAGATTGAAGCCAATTTTCCAGGCGAGTGCTGCCCTGCATCCCTTC
AGAGGAGTGGCCCAATCCCCCTACGCTACAGGAGGCGGACTTAGCCACCAGAAGNTCTT
TTTGTTGAGGACCTAACTGACGAATGACATTTTTTTCTTCTGTCCCTCCTACCCAGT
CCCTAAAAGAAATGGGGNAAAAAGGAAACAACAGCAGTCNTAAAAA

Sequence 1643

CGCGTCCGGAGGGGCTAAGAAGGTTGTCCTTGCTAATGCTCTGATCTGTAAGTGAATAG
GGCAGAACAGTTCAGCCTTGAGGTTAGAATTTAGCAGGAGCTATCCTGACTTAATATCCA
GTTGTGGGGTTTGCAAAACAAACAGCTGTATGTAATCATTGCCACTAGTTCATCTAGA
ACTCCTTTCTAGTTTGTTATTTTAAAATGTTTATACATAAAACCACCAAAATACATAGC
TTCGACAAGATGGAAGTTTATTTCTCTCTCCATAACAGTGCAGTGATAGTCAGCTGGTC

TABLE 1
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CAGGCCAGGCAAGGGGCTGGTCCATGATGTCATCAGGCACCCAGGTTCTACTGGCTTTG
CATGTGGCCACAGTTAGCAACAAANGGAGGCTGTAAATTT

Sequence 1644

CGCCACGCGTCCGGTGATGCGGACCCCGGGCGGGCGCAGGGCGCGGGCTCCGGCGCCGCC
GCTGCGTCCTCCCCGGCCGCGGGCGAGCCGCTGCAGAGGGAGCGTCGCGCCGGGGCGGAG
TGCGGGCTTGCGCGGCAAGTGCGCGCCGAGGTCACGAAATGGATTGGAGTGAACCGGAGA
CCCCGAAAACGGAAGCGCAGGGAGAAGGAAGAGGTGTTTGAAAAGCTTCTTCAGACCAG
CTGGTCTTGCTTCTGGAGCATCTCTTGAGCAGAAGACTCTGAGCCCCCGAACTCTGCAA
AGCCTCCAGAGGACATACCACCTCCAGGATCAGGATGCAAGAGGTTGCGCATCGGTGGTG
TGAACCTATTGTTAAGCACAAAGTTCACGAAAGCCTACAAAAGTGTGGAGAGGTTCTTCA
GGGAGGATCAGGCCATGGGGTGTGTACCTCTACGGGGAGCTGATGGTTGAGTGAGGACCC
CAGAC

Sequence 1645

TCGCCACGCGTCCGGGACATCGAGTNCGGGCTGGCTACGAACTCCTCGGGGGCGAAGGTG
GCGGAGAGGGATGGGTTCCAGGACGTCTGGCGCCCGGGGAAGGCTCGGCGGGACGGATT
TGCGGTGCGCAGCCAGTGCCGTTGTCCTCAGGTGCTTGGCGTGATGATCGGGGCCGGA
GTGGCGGTGGTGGTCACGGCCGTGCTCATCTCTGGTGGTGCGGAGGCTGCGAGTGCCA
AAAACCCCAGCCCCGGATGGCCCCCGGTATCGGTTCCGGAAGAGGGACAAAGTGCTCTTC
TATGGCCGGAAGATTATGCGGAAGGTGTCACAATCCACCTCCTCCTCGTGGATACCTCT
GTCTCCGCCACCTCCCGGCCACGCATGAGGAAGAACTGAAGATGCTCAACATTGCCAAG
AAGATCCTGCGCATCCAGAAAGAGACGCCACGCTGCAGCGGAAGGAGCCCCCGCCCGCA
GTGCTAGGAAGCTGAC

Sequence 1646

TCCGCCAAGTCTGCGATGATGGAATCAACACCTTCCGCGACGAGGGGCCGGGTTCTGCG
GCGCCTGCCAAACCGCATACCCAGCCTGCGGATGCTCCGGAGCTTCTTACCGACGGGTC
CTTGGATAGCTGGGGCACCTCTGAAGATGCTGACGCTCCTTCTAAGCGACACTCAACCTC
TGACCTCTCAGATGCGACCTTCAGCGATATCAGGAGAGAAGGCTGGTTGTATTATAAGCA
GATTCTACCAAGAAGGGGAAGGCTGAGGACCGGGATGACATGCTGGGCTGGATCAGAGC
GATCCGGGAGAACAGCAGGGCCGAGGGCGAGGACCCCGGCTGTGCCAACCAGCTCTGAT
CAGCAAGAAGCTTAATGATTATCGCAAAGTGAGCCATAGCTCTGGGCCCAAAGCTGATTC
CTCCCCCAAAGGCTCTCGCGGCTGGGGGCGCTCAAGTCTGAGTTCTCAAGCAGAGTGC
GGCCACGTGGCCTCANGACTCAAGACCTGCCCGCAGGGAGCAAGGATGACAGTGCTGCAG
CCCCAAAACCCC

Sequence 1647

GGTGTGCCCCCGCGTCCGGTTTCTTCTAATTTATATTTCCGATACATANGTGTAGAACA
GGAATTTGCAGAAGCCATTAAAGTTATCTTTGAGGTAANGCTCTGATTTAGCATTATT
CTGATAAAATCTAATACATCATGGGATATATATAAAGCAACTTAATTCTTGTGGTGTAGT
CTTAATAGTTTTGAATGTTGACTGAATGTCTATAAAATTGTGAGTTTGTCTTTGTTACAT
TCCAGTGTTTCTGCCTCTTGGCATGCTTAAAGCACGGCTTACTTCATCTGCTCCTTACAC
ACTAAAATGCTGTAGTGTGCTCAACTACAGAAATAGCCGCTGCTAAGTTGATGTAGATT
TTCTACTTGAATATTTTATGGTTGTAGGAACCTCAGGAGGGTCAGTGTTTACTGGTTTA
TATATGCCTTCTTTTCTGTTTGAAGTCTCTCTTTGAAGGGATTCTAACAGAACAAA
GCTGCTGATCACCTAAGTTGGAAACAGNAAAGNGTAATTAATAACTTAATGC

Sequence 1648

TCACCACGCGTCCGAAAGTCCGTGACATGGTTCCCCGTGGTGGCCCGTGGCAGCCCGTGG
CATGGCGTGGCTCAGCTGTCTGTTGAAGTTGTTGCAAGGAAAAGAGGAAACATCTCGGGC
CTAGTTCAAACCTTTGCCTCAAAGCCATCCCCACCAGACTGCTTAGCGTCTGAGATCCG
CGTGAAAAGTCTCTGCCACGAGAGCAGGAGTTGGGGCCACGCAGAAATGGCCTCAAG
GGGACTCTGCTCCACGTGGGGCCAGGCGTGTGACTGACGCTGTCCGACGAAGGCGGCCAC
GGACGGACGCCAGCACACCGAAGTCACGTGCCAAGTGCCCTTGATTGTTCTTCTTTCT
AAAGACGACAGTCTTTGTTGTTAGCACTGAATTATTGAAAATGTCAACCAGATTCTAGAA

TABLE 1

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ACTGCGGTATTCCAGTTCTTCTGACACCGGATGGGTGCTTGGGAACCGTTTGAGCCTTAT
AGATCATTACATTCAATTT

Sequence 1649

CNCCACGCGTCCGGGGATCCCTGGGGAGAGTAACAGTGGCCCCACATCCCTCCTCCTGGG
AGACGCTGGTGCAGGGCCTCAGTGGCTTGACTCTCAGCCTAGGCACCAACCAGCCCCGGG
CTCTGCCTGAAGCGGCACTCCAGCCACAGGAGACAGAGGAGAAGCGCCAGCGAGAGAGGC
AGCAGGAGAGCAAAATAATGTTTCAGAGGCTGCTCAAGCAGTGGTTAGAGGAAAAGTGA
ACGTGCACCCCCATGGGATGGAGACCCGAAGGGACTCAGACGGAGCCGCCGTGTTGGCAG
CGCTGGGTGTGGGGCCATTTTGGGGACCAACAGCAAGCTGTGGTCGGATGAGTGCCAG
GACCTGTGTACCGGGACACGTGGGGAGTCCCTCCAGCATGATGCTTGACTGACCCGAGGA
AGGTCCTCATGTTTCGTGCCTGTCTCGGATGGCTGTGAGGCATTCTTGGCAAGGG
ATGCTTGCGTACCAAGCGGTCCTACCGCATCTACATGGCTTCTGTGATGCATGTTGTGCG
TTTCCACCCNGGAT

Sequence 1650

CGCGTCCGAGCTTTGCAGGGAAGAACAGAGTATGGGTCTCTCAGCCCCTCATGCCTCGG
AAGGCTACTACGCCTCATGATGAGCCTGCTGAAGGACGATGTGTACTGTGAGCTGGCGG
AGAGGCACATCCAACAGATTGTGCTCTTCCACCAGGCAGGTGAGGAAGGAGGCAAGGTGA
GAAGGATCACCAGCGAGGGCCAGATCCTGGAGCAGCCCCTGGACCCTAGCCTCATCCCTA
AGCTGATGAGCTTCTGAAGCTGGAGAAGGGCAAGTTTGGCATGGTGTCTGAAGAAGA
CGCTGCAGGTGGAGGAGCGCTATCCATATCCCGTTAGGCTGGAAGCCATGTACCGAGGTC
ATNGACCAAGGCCCATCCGTAGGATCGAGAAGATCAGGCAGAAGGGCTTTGTCCAGAAA
ATGTAAGGCCTCTTGGTGTAGAGGGCCANNGTTGGTTGNCTGAGGGGGAATTGACCCGTT
GGAAGGGGGAAGCAATGAAAGGGCCAAAG

Sequence 1651

CGCGTCCGGGATGCCTTGGGTCTGAAAGTCGATGAAGGACGCGATTACCTGCGATAAGCT
TCGTGGAGTTGGAAATAAACTATGATACGGAGATTTCGAATGGGGTAACCTAACTGAGC
AAACCTCAGTTGCATTTTGTGATGAATCCATAGTCAAATTAGCGAGACACGTTGCGAATTGA
AACATCTTAGTAGCAACAGGAAAAAGAAAAATAAATAATGATTTCTGTCAGTAGTGGCGAGCG
AAAGCGAAAGAGCCCAACCTGTAAAAAGGGGTTGTAGGACATNTTACATTGAGTTACAA
AATTTTATGATAGTAGAAGAAGTTGGAAAGCTTCAACATAGAAGGTGATATTCCTGTATA
CCGAAATCATAAAATCTCATAGATGTATCCTGAGTAGGGCGGG

Sequence 1652

GTCGCCNCGCGTCCGCAACATTATTGAGATTGTCGTGTATAGTCATCGAATATCAGCCAG
TTCCTGTAATTTTGTGACACGCTCTTGCCAAGCCCACCAAGTATTTCTTTATAGCTAA
AAGTTCCATAGTACTAAGGAAATAAAGCAATAAAGACAGTCTCAGCAGCCAGGATTCTGG
CTGAAGGAAATGATCCGCCACCCTGAGGGTGGTGTGATGGTAGTTTCTACCCATACCTCAGC
CTCAGGCGAGTGGCTTATAGCCTCCATTATGGTGCACCTTTATTTATGGTACTAAGATAA
AGACTGTCAATCCATTGATTTATCTCCTCCTGTCCCCCATCTAAATACCCATGCTGCTT
TTCTGGAGTGTTGTGGGGGGGTTACCAGCTTGATCCACTGGTGTCTTTAAGAAGGCCCA
AGAAAGGTCTTTGGGGCATTGCCAAAGAAAATCCCGGATTTATGTGGGAAAACCTCACT
TTTCTCTTACNNGGCTGGTACCAAGA

Sequence 1653

CCGTCCGTTTTTTTTTGAACCTACCGTAAAATTTTTTTTTAAAAAGTGCTTGAAAAAT
TAAAGAGGAATAAAAGGGGGGTGAACAGCCAGTACGATAGTGCATGCCTGAAATTCAGT
GCTTTGGGAGGCCGAGGCAGGAGGATCGTTTGAGGCCAGTAGTTGGAGAGCAGTGTGGG
AACGTAGCAAGACCCCATCTCTACAAAAAATTTAAAAAGTTAGCCGGGCATGGTGATTAC
ACCTGGAGTTCAGCTGCTGTGGAGGCTGAGGTGGGAGGATCGCTTGAGCCAGGAATTT
GAGGCTGCAGTGAGCCATGATTGCACCACCGCACTTCAGCCTAGGTGACAGAGCAAGGGT
CTACCTCAGAAAAAAGAGGAGGAGCAAGCACGTGTTGATGGGTGGAAATCCAGCC
AGAAATGCTGAGGCTGAAAAGATTGTTCCAGTTTCTGAGTGGTGGGAGGGGAAAGGGGAA
ATT

TABLE 1
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Sequence 1654

CGCGTCCGCTGACATTTCTAGGAAGCTNGGAAAAGGAAAGTGAAGGAATGGTCTAAAGA
AATGACCATTACACTGATTTTGTCTGGACAGTCTGGCCGCAGGTTATTCATAGATTATT
CAGCCTTTGCAGGACTTGGATTGAGGGTTTACTCAGTCCCTTTACCTTAGGTGGAATCT
TCTTAAATTGAAATTTTTGGTAAGGAATTCATTTACAGGTAGTGTTTCAGACTCTGAAA
GCCCTGACTTGGTTCTTGGCTTCTACTGTACTAGTTACTAGTTACTGGTACTGTTGCCAA
GCAATCTGCTTGAATTTGTGGATCCCTGCTGTCCCTAATCCCACCCCTGCCCTGAGA
CAGTGAATGTAGTCCGTGAAGGGAGTGCCTCTCTGGGACCCCTGTGTTGTTACAGGCTG
TGCAGTGCAACAATTCAGCAAAAATACCCTATCCCCGCACTTAGTCATTCTGGTAACT
AACAATTTTGAAATACTCATATAAAATGAACAGGAAAGTGGTTAGTG

Sequence 1655

GACCACGCGTCCGGACCCAGACCCGGCTGACCCACCTACCCGCGATCCTGCCCATGGCTG
ACGGGCTCTTTTCGGCGCAGACCCTGGGGTCTCGAGCAGATTGCCCCGACCCCGAGTCCG
AAGGCCTGTTTGACAAGCCTCCCCGGAAGACCCTCCCGCTGCCCGCGGGGCCAGGTCCG
CGTCCGCCGCGGGCAAGAAGGCTGGTCCGGCGCGGGCGGGAGGGCGCAGGGGGGCCGCG
CCGGGCAGCCCCGAAGGCCGCATCGCGCCCCCGCCCAAGAAGGAGGCGCCTCCACTGG
ACGAGGGCTGCTATCTCGACCATTTCCGCACCTCTCCATCTTCATCTACGCAGCCATCG
CCTTCTCCATCACCTCCTGCATCTTTACCTATATCCATTTACAGCTTGCTGAGTGGCCA
GCGCGGGACGGGGTGGGCGCAGGACCGAGCGGGGAGGGAAAGGGGAAAACGGGGGCTNGG
CATTTTGTGTTTTAG

Sequence 1656

CNCTAACCCCGAACTCTAGATCGTCTTGCTTGTTTGTCTGAAGAAGGGAATGAAATAGAA
AGTGGAATAATAATTTTCAGAGCATCTTCCCTTAAGTAAGCTACAGCAAGGCATAAAA
TCTGGTACATACCTCAAGGAACATTTAGAGCTAGCAGGGAAAATTACTTGGAAGCTACA
GTATGGATTATGGCGACAGTGAAGAAAATAAGAGATAATCTTACAGGGACTTAAACAT
TTAAACAGAGCTGTTTACGAAGATATTGTGGCTGTGGAGCTTCTCCCCAAGAGTCAGTGG
GTAGCACCATCTTCTGTGGTTTTACATGATGAAGGTCAAAATGAAGAAGATGTGGAGAAA
GAAGAAGAGACAGAACGAATGCTTAAGACTGCTGTAAGCGAGAAAATGTTGAAGCCTACA
GGTAGGAGTTGTAGGAATAATAAAAAGGAATTGGA

Sequence 1657

CGTCCGCGGACGCGTGGGCGGACGCGTGGGCTGGCTGTATCTATACTTTCCTTGAGAAAA
ATCCCATAAAGTGGATGGACCTGTGAAGAAAATGTATGCTTATGGCCTAGCCTTCATGTC
TGGCTGATGTATCCTATAAGGCAGTAAGCCCCCTTTCTAGTCTCTGGTAAGATGCAAGAG
CTCATATCCCCATCACTGACATTTTAGTTTGGAATAATATTGAGACTGTGCTATGACCA
ACCCCTGATGTTGTTTTTCTTTCAAACCTTTGCATATGAGTAGAGGAAAAGCCTAAAA
GTTAAGTATTTATGTCTGGGGGGATACCTTCAGGTGTCTTATCTGTTTTATGCAAGAATT
TATGTGTTTCATCTTTATTCAGTGCAAAGATTTTTTTTTAAATTTTGTATAATTGGAGG
TAACATTAAGACAACCTCTNCTCCACAAGAAAACCTCTAAAATTAATATTCCTTAAGATT
TGTTTTTCTTTGCCTTATAATATTACCTTTTAATTGCATGCAAGATTGTCATACTTTTC
AAAAG

Sequence 1658

GTCCGCCCCGCGTCCGTTTGATATACCACTCTGATAACTCATATAAAAATATCATCATAAA
AAGCTTAATTTATCCCTTTTATGTTGGTTTTAAAGGTAATGCTTACCATATTTTATA
ATTGAGAACTCTACATAGTAGAATCCATTCTATAATACATGTGTTGACAAAGCTTTAGA
GAAAGTTTCTATTCTCTTCCATTTCCCTGCCCAAAGTGCTGACATAGGCAGTGATGAA
GAATCTTTACCAAGATTTTCAGGGGTGACCTATGAAATTGCTTTAAATGCACTGCTGGTG
TAAATAATTAGCAAGCAAAAGCGTTTCTGTGACTTCAGGTACCAGCTTAAAGAGCACTAG
GGATGGGGAACGAATGCCAATCAGACTCCACCTAGAGCACCAGGAAACAGCTTGTCCCT
GGTAGGGAAATGGTGTGCTGAAAG

Sequence 1659

CGACCNCGCGTCCGGCTGNTGACCCCATGCTGAGTGGCCNGTGGGGAGCGGCGCCCGGCA

TABLE 1
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GGCTCTTCTGGGGTCGTCTGTCCTATCCGTGGATTGTATATACTCTTCTCTGTTAAGGAG
TTTTTCCCAAGAAGAAAAGTATTTAAAAGAAATACCAGTGAGTGCCTTAAAGTTGGAGAA
GTAAGTGGCCATGCCCAGAAATAAGGATGCCAGTGCCAGAGCAGTGAGATTAGTCTGT
GTCCACAAGCAGAGGCCCCCTCGATGGGAGGGAGTGCCAGGCAGGAGAAGGTGGCGCTGC
CAGGTGCCCGGGTCTATTGGAGGCGCCCCATCTCAGACTTCCTAACACAGCCTGTGTGGA
AGGCAGAACAAAGAATGCATGCCAGTCAGAAATCTGTTCTATTCTGCTCCAGGAAAAATC
GGAAACCTGTGAGTCANAGTCAGAGAACTTACCCAGCCACGTATTCTGTTTCATGGGT
NCTGTAGATGTTTTGAGTCAAGGAAGGTA

Sequence 1660

TCGACCNCGCGCTCCGGTGGGTCCCTGCCGGCGCGGGCGGGCGCAGACAGCGGCGGGCGCG
AGGACGTGCACATATGGCTCGGGGCTCGCTGCGCCGGTTGCTGCGGCTCCTCGTGGGG
CTCTGGCTGGCGTTGCTGCGCTCCGTGGCCGGGAGCAAGCGCCAGGCACCGCCCCCTGC
TCCCGCGGCAGCTCCTGGAGCGCGGACCTGGACAAGTGCATGGACTGCGGCTCTTGACAG
GCGCGACCGCACAGCGACTTCTGCCTGGGCTGAGCTGCAGCACCTCCTGCCCCCTTCCGG
CTGCTTTGGCCCATCCTTGGGGGCGCTCTGAGCCTGACCTTCGTGCTGGGGCTGCTTCT
GGCTTTTTGGTCTGGAGACGATGCCGCAGGAGAGAAGAAGTTCACCACCCCATAGAGGA
GACCGGCGGANAGGGCTGC

Sequence 1661

GGTGTGACCCNCGCGTCCGGCGCCCCGCTCGCATTGTTCCGGCGACTCTCGGAGCGCGCA
CAGTCGGCTCGCAGCGCGGCACTACAGCGGCCCGCGCCCGCCCCGCGCCCGCGCGCG
CAGGCAGTTCAGATTAAAGAAGCTAATTGATCAAGAAATCAAGTCTCAGGAGGAGAAGGA
GCAAGAAAAGGAGAAAAGGGTCACCACCTGAAAGAGGAGCTGACCAAGCTGAAGTCTTT
TGCTTTGATGGTGGTGGATGAACAGCAAAGGCTGACGGCACAGCTCACCTTCAAAGACA
GAAATCCAAGAGCTGACCACAAATGCAAAGGAAACACATACCAAAGTAGCCCTTGCTGA
AGCCAGAGTTCAGGAGGAAGAGCAGAAGGCAACCAGACTAGAGAAGGAACTGNNAAACGCA
GACCACAAAAGTTTCACCAAGACCAAGACACAATTATGGCGAA

Sequence 1662

GACCACGCGTCCGGAAGGAAGGGACGGGCTGAGTTCCCCGACGAGAGACACACCCAGATT
TTCTGACGCTTGGGGAGAGGTCTCTCCAGGAGCCTTGGTCCCTCCTGGCCTGCCGGAGT
CCTTAGCCAGGATGGAGGCTGTTGTGAAGTGTACCAAGAGGTGATGAAGCACGCAGATC
CCCGGATCCAGGGCTACCTCTGATGGGGTCCCCCTTGCTAATGACCTCCATTCTNCTGA
CCTACGTGTACTTCGTTCTCTCACTTGGGCCTCGNATCATGGCTAATCGGAAGCCCTT

Sequence 1663

GTCGACCACGCGTCCGGGCTCCATCCGGGCTATCCTGCCGCCTTAGCGGCTGCTTCTCCC
CAGGATGCGGGCAGGGGGCCTCTCTCCACTCCCCACACACCGATTCTGAGTAGCGATA
GGGGCTGGAGGCTTATTTATGGGGTAGGGGGCCGCTGGTAGGCGAAGATTGTCCGAGGG
AGAGGGGGAGGATGAAGCCAGTGCGTGGCGGAGACTTGCCAGATGTTGATGCCTAAGAAG
AACCGGATTGCCATTTATGAAGTCTTTTTAAGGAGGGAGTCATGGTGGCCAAGAAGGAT
GTCCACATGCCTAAGCACCCGAGCTGGCAGACAAGAATGTGCCCAACCTTCATGTCATG
AAGGCCATGCAGTCTCTCAAGTCCCAGGCTACGTGAAGGAACAGTTTGCCTGGAGACAT
TTCTACTGGTACCTTACCAATGAGGGTATCCAGTATCTCCGTGATTACCTTCATCTG

Sequence 1664

CCGCGTCCGGGGGTTGGTACCCGAGCGCCTTCCCCTCACCTCAACCAGAGAAGAGCATCC
GGTTGCTTTTTAAAGCTTTTAGCCTGCCCTAGCAAGGACAAAGCATGTTAGATTAGAGAT
GCTTCTGCTGATCGCAGGGGTTCTTATTTGAAAACATCTATGATGGGGGTGGGGTGGGAG
GAGACAGGTTGTGGTTATGCAGGAAAATCTTGTCCCTAAAAATATATGAGTTTGGGGGTAA
GGGGTGGGATAGCCAAGCAAAATCAGTAATTTTAAAAATGAACATATGTATTTTTATT
AACTTTTAGTTAAATACAGATTTTACAACGAGGTGAGCATAAGCCTAAATCTATATAGAG
GGCTAACTCAGGCATTGTCTTGTATTATTTGTAGACTGGATTAAAAACAACCTGTCTGTT
TTGTNAGTTCCAGCTTCTTTGTTTGTAGATAAATTAGACCAAAAAGAA

Sequence 1665

TABLE 1

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CGGTNCGCTTAATGTCAATGTGGCCTGGGCTGGAGGTCTGGACCCCCCATGGGGGATCC
TGAGTACCTGGCTGCTTTCAGGATAGTCGTGATGCCCATCGCCCGAGAGTTCTCTCCAGA
CCTAGTCCTGGTGTCTGCTGGATTTGATGCTGCTGAGGGTCACCCGGCCCCACTGGGTGG
CTACCATGTTTCTGCCAAATGTTTTGGATACATGACGCAGCAACTGATGAACCTGGCAGG
AGGCGCAGTGGTGTCTGGCCTTGGAGGGTGGCCATGACCTCACAGCCATCTGTGACGCCTC
TGAGGCCTGTGTGGCTGCTCTTCTGGGTAACAGGGTGGATCCCCTTTCAGAAGAAGGCTG
GAAACAGAAACCCAACCTCAATGCCATCCGCTCTCTGGAGGCCGTGATCCGGGTGCACAG
TAAGTGTGGAGATGGGACACTCGCTGAGCTCAGACTGAAGGATCTTGGT

Sequence 1666

CGACCNCGCGTCCGGTGTGATGATCGCTACTGCTGGAGACCGCACAGAGGAGTTCCACGG
CCACNGCAGTGAACCTCCTGGGGAACCTGCCCTCAAGTGTCTGGATGTTCTCCTCACCC
TGGAGCCACATGGAGACTCCACGGAGTTCATGGGAGTGAATATGGATGTGATTTCGTGCCC
TCCTCATCTTCTAGAGAAGCGTTTGCACAAGACACACAGGCTGAAGGAGAGTGTAGCTC
CCGTGCTGAGCGTGTGACTGAATGTGCCCGGATGCACCGCCAGCCAGGAAGTTCCTGA
AGGCCCAGGTGCTGCCCCCTCTGCGGGATGTGAGGACACGGCCTGAGGTTGGGGGAGATG
CTGCGGAACAAGCTTGTCCGCCTCATGACACACCTGGACACAAGATGTGAAGAGGGTGGC
TGCCGAGTTCTTGTGTTG

Sequence 1667

NCGCGTCCGACACTATTTAGAGAGCTCCCTTCCACCTCTCTGCCAGCCTTGTTACCTC
ACTTCTGCTCTGGCCATGGCTGTGAAGGGCCAGCCAGCTCCCTGTTTTGATGTTCTGTG
CAACAGCTCCGGGGTCTTGTGACTGGAGATCCTCAACAGGCCCTGGAGCCAGGACTGGAG
TCTTGGCAGCTGATGAGCAGCACCTTGCCGGCCAGGAGGAGCTGATGCTGACGATCTCCC
CAACATCTGAAGGCTTAAAGAACATTGTCGTTCTTCAGCCCTCCTTGCTTCTCTCAATAC
AATAAGCATTGCAGAAGCAAAAGGGTGGCCTCTGCTCCAGGCAAGGCAGCTGGCTCTGT
CTGGGGCGCTCGGCCCTGGGGCTTGGGTGCCACGTGCTGAGATTGCATAGTCAAAACAAGC
CATTTTTGCCAACAATAGCTTGTGGCTCCACATTTTTCTACCCTTGCACTNAANGGCCA
GACCACTCTNTGCATGGACCAANACCATNTTCCAAACCCATGGGGCTTTTTTTNCC

Sequence 1668

CANGAATACTGAAAAATGAAGCCTAAAATGAAGTATTCAACCAACAAAATTTCCACAGCA
AAGTGGAAGAACACAGCAAGCAAAAGCCTTGTGTTTCAAGCTGGGAAAATCCCAACAGAAG
GCCAAAGAAGTTTGCCCCATGTACTTTATGAAGCTCCGCTCTGGCCTTATGATAAAAAAG
GAGGCCTGTTACTTTAGGAGAGAAAACCAAAAAGGCCTTCACTGAAAACAGGTAGAAAG
CACAAAAGACATCTGGTACTCGCTGCCTGTCAACAGCAGTCTACTGTGGAGTGCTTTGCC
TTTGGTATATCAAGGGGTCCAGAAATATACTAGAGCACTTCATGATTCAAGTATCACAGG
AATTTACCTATTACAGAGTATCTTGCTTCTTAAGCACATACAATGGATCAATCCATTA
CTTTTGCTTTGGAGGATGGAAAGTTATGAGATATATGTTGAAGACTTGAAAAAAG

Sequence 1669

GTCGACCNCGCGTCCGCCCGCCCATCACTGCTGTTCCCTCCAGGGCCAGCACTCGGGCGAG
GCAGGGGAGCTGCCTTCGGTACATAATTTGAAGGGGCACTCCCTCTTGGGCACATGCCGG
CCCTGAGTGCCCTCCCTTGCCCTCACTCTGATCCTGGCCCCATAATGTCCTCAGTGGAAGGT
GATGGGGGGCCGGTGTGTGGGGAGAGTAGAAAAGAGGGGTTGGCATGACTAAAAATACCAG
TATGTGTATTAAGTATTTTGAGAATGAAATGCCAAGGAGTGCCTACTATATGCCAGCTCT
AGGAATGGAGTAGACAGTGGACACAAGAAGGACTTACGCCCTGAGCACAGGTGCCAATGG
TGACAAGACTGGCAAGACGTGAGGGCATGAATGGTTCATTACAGGCAGCTGCTGCAGATGT
GGTCACCTGGTGCCATCTGCTGCTCCCTTTTCCACTTTTCTATGTCCTCCTTCCACCCCA
A

Sequence 1670

CGACCNCGCGTCCGGTCTGAAGGGTCTGGCTGGTGAGCCAGGTTTTAAAGGCAGCCGAGG
GGACCCTGGGCCCCCAGGACCACCTCCTGTATCCTGCCAGGAATGAAAGACATTAAAGG
AGAGAAAGGAGATGAAGGGCCTATGGGGCTGAAAGGATACCTGGGCGCAAAAGGTATCCA
AGGAATGCCAGGCATCCCAGGGCTGTCAGGAATCCCTGGGCTGCCTGGGAGGCCCGGCCA

TABLE 1
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CATCAAAGGAGTCAAGGGAGACATCGGAGTCCCCGGCATCCCCGGTTTGCCAGGATTCCC
TGGGGTGGCTGGCCCCCTGGAATTACGGGATTCCCAGGATTCATAGGAAGCCGGGGTGA
CAAAGGTGCCCCAGGGAGAGCAGGCCTGTATGGCGAGATTGCNCGACTGGTGATTTCGG
TGACATCGGGGACACTATAAATTTACCAGGAAGACCAGGCCTGAAGGGGGAGCGGNGCAC
CACTGGAATACCAGGTCTGAAGGGATTCTTTGGAGAGAAG

Sequence 1671

GAGTCGACCNCGCGTCCGCAACTGGTGTCCAGCTCGGTGCACTCCAAGCGCCGTTCCCGA
GCGGACCTCACGGCCGAGATGATCAGCGCCCCGCTGGGCGACTTCCGCCACACCATGCAC
GTTGGCCGGGCGGAGACGCCTTTGGGGACACCTCCTTCTCAATAGCAAGGCTGGCGAG
CCCGACGGCGAGTCCTTGGACGAACAGCCCTCTTCTCATCTTCCAAACGCAGTCTCCTG
TCCAGGAAGTTCCGGGGCAGCAAGCGGTACAGTCGGTGACCAGGGGGGAGCGGGAGCAG
CGTGACATGCTGGGCTCCCTGCGGGACTCGGCCCTGTTTGTCAAGAATGCCATGTCCCTG
CCCCAGCTCAATGAGAAGGAGGCCGCGGAGAAGGGCACCAGTAAGCTGCCAAGAGCCTG
TCATCCAGCCCCGTGAAGAAGGCCAATGACGGGGGAGGGCGGCGATGAGGAGGCGGGCAC
GGAGGAAGGCAGTGCCCCGTGGAAT

Sequence 1672

CGCGTCCGCTCGCGGCNNGGCATCGNGTACATCCTCAGCAACCATGGGCTACGTGCGCCA
GCTCTCCAGGCCCTGGACACATCCAACGTGATGGTGAAGAAGCAGGTGTTTGAGCTACT
GGCTGCCCTGTGCATCTACTCTCCCGAGGGCCACGTGCTGACCCTGGACGCCCTGGACCA
CTACAAGACGGTGTGCAGCCAGCAGTACCGCTTCAGCATTGTCAATGAACGAGCTCTCCGG
CAGCGACAACGTGCCCTACGTGGTCACCCTGCTTAGCGTGATCAACGCCGTATCTTGGG
CCCCGAGGACCTGCGCGCGCGCACCCAGCTGCGGAACGAGTTTATCGGGCTGCAGCTGCT
GGACGTCTGGCTCGCCTGCGGTGAGTCCCCACTGTAGCGGTCTGCCGNTTNNCCCTC
CTGCTCCCAAGGCCAGGCCACCTGCCCTTTGGCTCCAGCCACCTCACCTAAGCAGCAC
CTTCCAGATGGCAGGGGAGGTGGC

Sequence 1673

GTCGACCACGCGTCCGGCCAGAGCTGAGTGGCAGCCGCTCCCTTATGCAGGACATGTGC
TCTCGGCTTACCAGGGTTCTGACCGGGTCTGCTTCTGCATTACAGCGCCTCCTGGACC
TGAAGGCATCTGAGTGTGAGACCCTGTTCTAACTCTTAGAAGTGACATTGTAAGAGGTGG
TGGGGACCAGCTAATTGGTCCAACCCAGCCTGAGTGCACCACCCTTTGAACAAATGTATC
AGTGATGAAAATTTGCCTTTGCCCCGGCTTGCTGTAAATCCCAGCACTTTGGGAGGCCGA
GGTGGGCGGATCACTTGAGGTGCGGAGTTCAGGACCAGCCTGGCCAGCGTGGCGAAACCC
CGTCTCTACTAAACATAAAAAAATTAGTCAGGTGTGGCGGTGCGTGCCTGTGGTCCCAGC
TATTCAGGAGGCTGAGGCACCAGAATTGCTTGA

Sequence 1674

TGACGGCGGCCCGGCCGACGGGAGCCGGGGCGGGGCGGGGCGGNCCANCGAAGGAGCGCGCG
GGCGGTCTGGCCCCGCCCCCTCCCCGCCCGCCTTCCCGGTGACCTTCAGGGGCCCGGGTG
GCGGGCGCAGGCCCTGCGGGCGGCGGGGATGTTTCGTGCAGGAGGAGAAGATCTTCGCG
GGCAAGGTGCTGCGGCTGCACATTTGCGCGTNCGACGGCGCCTAGTGGCTGGAGGAGGCC
ACCCNNGGACACCTACNGTGGANAAANCTCAAGGAGCGCTTGCTCAAAGCACTGTGCTCA
TGGGGAGCTTANAAGATCCCCAAAAGTATAACCCATCATTAAATTTAATCCCACGCTGCC
TNAANANAAGGGGTGCTTGNGTGATTGCCATGNACCATNCTTGGGAAGGAAGAAACCAT
CCCAGGACCCAAAAGATGGGCCCTATTNTTGGATTA

Sequence 1675

CACGCGTCCGGGATCCCGTACCCGGGACAGACTCGGCGCCGCTGGCTGGCCTGGCCTGGT
CGTCGGCCTCTGCACCCCGCGCGGGGGTTAGCGCGATCTCCTGCACCGTCGAGGGGG
CACCCGCCAGCTTTGGCAAGAGCTTCGCGCAGAAATCTGGCTACTTCTGTGCCTTAGTT
CTCTGGGCAGCCTAGAGAACC CGCAGGAGAACGTGGTGGCCGATATCCAGATCGTGGTGG
ACAAGAGCCCCCTGCCGCTGGGCTTCTCCCCCGTCTGCGACCCCATGGATTCCAAGGCCT
CTGTGTCCAAGAAGAAACGCATGTGTGTGAAGCTGTTGCCCTGGGAGCCACGGACACGG
CTGTGTTTGATGTCCGGCTGAGTGGGAAGACCAAGACAGTGCCTGGATACCTTGAATAG

TABLE 1
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GGGACATGGGCGGCTTTGCCATTCTGGTGCAAGAAGGCCA

Sequence 1676

TCCCTCTGCTGATGATGGATGCCCCAACACCTGTGCCTAACACCCCTACTGAACCCAC
AGCTCCAGCCTTAGTTTTGGAGTCAAGTGTTAAAGGTTTCTGGCCAGAGGAATTGGGGT
CTTGCCATCCCTGCAATAGCCCTTTATGGGCTCTGGGAGACAGCTTAGGGAATAAATG
GGGATTTCCCTTTTTCTACCCACTCCTTTGCTTCCTCCAAGACTTACCCAACCTCCTTC
CCCCTCAGAGAACCAAATAGCCTGAGGAAGCAGGAGAGTTCCTGGTTATGGCAGATTCTT
GGTGATTTGGGGCTTCAAGACAGTAGGTGAGAGATGCTGTCAGGGACGTATCTTCTTCAT
ACCAAAGTCACTGGTCCTTTCTCAGCCTCTCTCGTGCTTTTCTCCTAATGACCATATTTT
TGCCAAAATTGGGAATATGTTATCTGACAGACCAGAATATTTGAAGGTTTGGGCTG

Sequence 1677

GCGCCGCGGATATNCGGATCAACCTATGGTNTCAATATTGTNAGTTATTGAGCATAAACA
GAATTATTTCCCAANACTTGATCTGAAATATTNNTAATGGTCNTACTNGAACTTATATT
CTTNCTGGGAGNGANGTNTTATCATTTTTCCATGGAGACAGGTTCTAACTCTGTTGCC
AGGCTGCANTGCAGTGATGTGATCATAGCTCACTGCAGCCTGAAACTCCTGGGTGTCAAG
TGATCTCTGGCCTCAGCCTCCCAAGTAGTTGGAACCTCAGATACGTGCCACCACAACCAG
CTAATTTATTTTTAGAGATGAGGTNTCGCTATGTNGCCAGTCTGGCCNNCTAGCCNCA
AGTGATCTGGCCATCTNAGCCTTCAGTTGGAGATGTCTGATTTATGTTAATAAGAAAG
CTGTTGATCGTTTATCATAAANGCATT

Sequence 1678

GTCNCCNCGCGTCCGCTCCTCCGCCGGCATGCAACTCGGCGCCCGCGGTCCATGGACCGG
AACCTCGGCGCGGACGGGACCGGCGGCGGCGGCGATCGCCGCTCCCGCCTCAGGCTCC
TCCTCCTCGCTCTCGCGCGCTCCGCCGGACTCCCGCAGGCCCTGCACCGCCGCGCCAG
GCTAGCGGAGCTGCCCGGGAAGCTGGGTGACGGGTTCCGCGGCTGCCCGCGGACTGCGGC
CTACTCCGCCGCTCTCAGTGCTATTGTCCCTGGGCCTGGCCTTGAGCGGGTCCACTGGG
GAAGGCNCGTGTGCGCGGCTCCGCCGAAGATGCCGGACCAAGCCCTACAGCAGATGCTG
GACAAGAAGTTGCTGGGTTTGTGTTGCTACTGATGAAGATGATAGAACAGCTGAATGGGT
GAGGACCATGGCAGGTGCAGGAGGATCTACAAAATGGGTTCACCAGGGCCTGTCTACAAC
GCTGGGTGGATGAAAAGCAAAGAG

Sequence 1679

GCGTCCGGGCCCGCGACCGAGCGTGCGGACTGGCCTCCCAAGCGTGCGGCGACAAGCTGC
CGGAGCTGCAATGGGCGCGGCTGGGGATTCTTGTTGGCCTCCTGGGCGCCGTGTGGCT
GCTCAGCTCGGGCCACGGAGAGGAGCAGCCCCGGAGACAGCGGCACAGAGGTGCTTCTG
CCAGGTTAGTGGTTACTTGGATGATTGTACCTGTGATGTTGAAACCATTGATAGATTTAA
TAACTACAGGCTTTTCCCAAGACTACAAAACCTTCTTGAAAGTGACTACTTTAGGTATTA
CAAGGTAAACCTGAAGAGGCCCGTGTCTTTCTGGAATGACATCAGCCAGTGTGGAAGAA
GGGGACTGTGCTGTCAAACCATGTCAATCTGATGAAGTTCCTGATGGAATTAATCTGCG
AGCTACAAGTATTCTGAAGAAGCCAATAATCTCATTGAAGGAATGTGAACAAGCTGAACG
ACTTGAAGCAGTGGAT

Sequence 1680

GTCCGGCGTGGGGAAGGGTGGGGTGAGGGGGCGTGCCGCGAGCTAGGGCGGCGAAACTCT
CCTCCCCCTCGGCCCCACCGCTGGGACGGCGTGAACGTGGTGTGCGAGGGATGTCAGCCT
TCTCTGAGGCGGCGCTGGAGAAGAAGCTGTGCGAGTTGAGCAACTCGCAGCAGAGCGTGC
AGACCTTGTCCTGTGGCTCATCACCACCGTAAACACTCGCGGCCCATCGTCACCGTGT
GGGAGCGGGAGCTGCGGAAAGAGTGGAGGTGCAACAAATGAGAAATTCGAATTGGAGATT
TTGTCAAACAGGAATTTACTCAAACCAAACAGGAAGCTTACTTTTCTCTACCTAGCCAA
TGATGTCATACAGAACAGCAAGAGGAAGGGGCCAGAGTTTACAAAAGATTTTGCACCAGT
TATA

Sequence 1681

CCGGCAAAGCAGGGACTCCTGATTTATATGTCCCTCCTCCTGGCAATCCTCTCACCCAC
CTCCCCCTGAGAACCTCAGTTCTTCTAAATTGCTAAAGCTGAGGGGAAAGGGATGCTTTG

TABLE 1
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CGGCAAAGGCGCTGCTGCCTCAAGCTTGCTTTACATGCCTCTCTAGTTCCTCTCGCACTA
CAGAGTGGTAGCGAACAAAAGCGTTTCGCCCTAGAAGCGACCTGAATGGAAAAATCTGCAC
ACGAATAATGGGTTTGTACGGAAAGTAGGGAACCGGGTCTGCAGCATTCCCTGGAGAC
AGACTTTCTGGTTGGTTTTCAAGGGTCCAAGGCAGCCATCAGCCCGGCTGTGCCCTCCCA
CCCTGCCTCCCACCCAGTTGATTCTCTCTTTGTGTAAGTTTAGCCCTCTGAGGGTGGTG
GAGTGAGAGCATCCCATCAGATATATATACGATTCATCAGTCGGCACTTAAAAAG

Sequence 1682

TCACCNCGCGTCCGAAAAACGCAGATGATATACCTGCAACATCNGTCATGGCTGCGCCCT
GTGCTCAGAAGCAACCCGGGTGGAATATTGCTGGTGCAACAGTGGCAGGGCACAGTGCCA
CTCAGTGCCTGTCAAAAGTTGCAGCGAGCCAAGGTGTTTCAACGGGGGCACCTGCCAGCA
GGCCCTGTACTTCTCAGATTCGTGTGCCAGTGCCCCGAAGGATTGCTGGGAAGTGCTG
TGAAATAGATACCAGGGCCACGTGCTACGAGGACCAGGGCATCAGCTACAGGGGCACGTG
GAGCACAGCGGAGAGTGGCGCNCAGTGCACCAACTGGAACAGCAGCCGCGTTGGCCAG
AAGCCCTACAGCGGGCGGAGGCCAGACGCCATCAGGCTGGGCCTGGGGAACCACAACATC
TGCAGAAACCCAAGATCGAGACTCAAAGCCCTGGTGCTACGTCTTTAAGGCGGGG

Sequence 1683

CCGTCCGCTCCTTGGCAAGAACGAAAGGTGTGATGAAACCTCCCTGCTCGGAAGGGTCTC
CGTGAGAGTGTCTCATTTACATGCTGGGTTTTGCAAGCGAGGAAGCCAGGCAGTGGAG
GAACTAGAGAGAGGCAGGCGTGTGTGTGGACAAGCGCTGGAGCCGAGCCCTCAGACTGG
CACGGGAACGCCAGCGTTGGGTGTTTACAGATTCACGCGTATGTCTGGGCTCACTCACAGC
ATGGCCGAGTGTCTGCAGTGTGCTGGTCTGACCCTTCAGAGCAGCAGTGGACAGATGAGA
TAAGACTGTTTCAGAAACAAAGATGGCCACAGCCTTCCTAACAAGCAGGTCATCTGGCCA
TGTCTGATTGTAAGTGGTAAAAGGCTTCAAGTCAGATTGATGATCAAGAAAANGTCAA
ACCCAGCCCAAGATTGGGAAAGCAGGTTNGTGGNTCCAANGCTTTTTAAAAAATTATT
TGAAGCTCTTCATTCTNTTCTGTGAGTGTGTCTTTCTCTT

Sequence 1684

NCCCACTACTGGGGGCCCCCTTCTGTCAGGCCCCATCAGGTGCAGAGCTGTGGGTCTGGT
CCAAGACACTGTCACTGATGTGGATAAATCTTGAAGGAGCTCAGTAATGTCCTCTCAGG
GATCTTCTGCGCCTCTCTCAACTTCATCGACTCCACCAACACAGTCACTCCCACTGCCTC
CTTCAAACCCCTGGGTCTGGCCAATGACACTGACCACTACTTTCTGCGCTATGCTGTGCT
CTCGCGGAGGTGGTCTGCACCGAAAACCTCACCCCTGGAAGAAGCTCTTGGCCTGTAG
TTCCAAGGCAGGCCTCTCTGTGCTGCTGAAGGCAGATCGCTTGTTCACACCAGCTACCA
CTCCAGGCAGTGCATATCCGCCCTGTTTGCAGAAATGCACCGCTGTACTAGCATCTCCT
GGGAGCTGAGGCAGACCTGGCAAGTTGTATTGATGCCTTCATCACGGGGCAGGGAAAGA
A

Sequence 1685

CCGCTGGTTATTACCCAGCTGGATGGTTTCCTTTTAGGCAAGAAGGAGGTCATCAGCAGG
CTCCCAACAATAATGCCGAAGTTAACAATGATGGGCAAAATGCAAACAATTGGAAGTTG
AAGAAATGGAGCGTCTTATGGATGATGGGCTTGAAGATGAGAGTGGAGAAGATGGAGGTG
AAGATGCCAGTGCAATTCAAAGGCCTGGATTAATGGCTTCAGCTTGGTCTTTCATCACCA
CCTTCTTTACTTCACTAATACCAGAGGGGCCTCCCAGGTTGCCAATTGACCTGAAAAAC
TGTGCCAGCTACAAGGAGGGTCTGACTTCAGGAAAGTGGTTTAAATAACAGTGCAATTC
AAAAAATTTATAACTTTCTTTTGATCATCATGTACAGAGGTGTTTTTTTCTTTAGGCT
TCTCATGCATATGAATATTTAAGCACGAATGGACTACTAAATATCTGAGTTTTTTTTT
TTTTTTTTTAAGAATC

Sequence 1686

CGCGCCGTTTGGCTGCCCTGCATAAGCTGCTACAAATAGAATAAAGAATTCATACGCC
TGTATCTATCATTTAGATGCATGGAAAAAATGGGCTTTCACACAATGGGTTTGGAGCT
GACTGGGAACAATGGAAAAAATTACATTAGCTGTGGTTGTAAAGTTTTTTTGGTTTGGT
TTTGTTTTTTTTTCTTTTTCTTTTTTTTTTTTACCATCTTGTGAAAGGTTTCTGAA
ACTCGATAATAAAAAGCGGTTGGTGTAAATTATTCTTTTGTGTACATTTTGAAGGAA

TABLE 1
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AAACATAAAAGAATGTATCCTTAGTACTGGTTCTTAAACAGCCCATAAAAAACCCATTGGC
CTGAAGCTTATATCTCAGGCCTATGCCCATCTTATAGTCTTGGAAGACAAAA

Sequence 1687

CGCGTCCGTGGGTCTCGCCCTCAACCTGTGCATGTATATGTGTGTCTTTGTGTGTGTATG
TGTGATCTCTGCCTGCAGGACCAGCCCGGTGGCACCCTGGATCTGACCCTGATCCGTGCC
CGCCTCCAGGAGAAGTTGTACCTCCCTACAGCTCCCCACAGGAGTTTGCCAGGATGTG
GGCCGCATGTTCAAGCAATTCAACAAGTTAACTGAGGACAAGGCAGACGTGCAGTCCATC
ATCGGCCTGCAGCGCTTCTTCGAGACGCGCATGAACGAGGCCTTCGGTGACACCAAGTTC
TCTGCTGTGCTGGTGGAGCCCCCGCGATGAAGCCTGCCTGGTGCTTGGCCTGAAGTTTC
CCAAGGAAGCTGTCTGGTGGGCCCCCTTGGGTGATGGGCCCCCTTGGAGGGCTTGAAGCCC
CCCCATGGGCCAAGCCCCAGCCCTGGGCTTCTGGTTCNTCTTGTCCTGGTCACCCCCAT
CCCCACTCCCCCTTGGGTGGGCTTGAACCTNCCACTTCCCTTGGGTGGGGCCC

Sequence 1688

AGGAGGNTTGAAGGAGTTGNNGGAGGAGGAGGATGGAGGCGAGGGCGAGCGAGCCCAGCG
GGGTCCNGNCGCCCCGCGGGCCAAAGTCGAGCCCTNCCGCCNNTGGGCGAGCGCGCCAG
CCGCCNNTTTCANAACAGTTCGNCGCCACAAAANAAAAGAACGGGGGGGTGCCGAGGTTN
CCATTGANCTCTTAAAGTGGTGCAGGTCCCTGTTGAGTGCGCTGCACCGGGCCGTGACC
CGCGCCCCTGTGCGTCCC

Sequence 1689

GGAGTCGACCACGCGTCCGCGCCGCGCCGGTGTCCGGACCGCTCGCCCCCGTTTGGAC
CCGACTTCGGTCTTCTGGGGTGTGATGCTCCTAAAGCCCCGAGAGCACGTGTCCAGACC
CTAGCCTGTACGACGCTGACTCTGCCCGGTCCCAGAACCAAGCCATGCCGGGGTGTGGC
CTCTGACCCACGCGGAGGGGACCTCGCCTTGCGGGACCCACCTGGAACCCGACCTNCC
AGNCTCGCAGCCGGCCTGAGCCGCCATGCGCGGGAAGTTGCTGCCGCTGGCCGGCCTATA
CCTGGTGCAGGGCCTGCCCTACGGGCTCCAGTCCGGCCTCCTGCCAAATGCTGCTTGCCT
GCCGGCGGCCTCTCGCTGACGCGCGTGGGGCTGGCCAAGGTTCTGTACGCTNCGTGGCT
GCTTCAAGCTGGCT

Sequence 1690

CNCCCCGCGTCCGCGGACGCGTGGGTGCTTGTGCTGAACCTGAGCTGCAAGTTGGAATT
GATATAATGAAGACTAGTTTTCCAGGTGCTGGTTCATTCCAGAATTCTTTCATATTATG
AAAAGAAAGTTTACCAACAAAGAATGGGAAACAATCAGAAGCTTTAAGGATGAGTGGAT
CAGCTGGATATGTTTTATAGGAATTGGGCACTTAAGGAAAGCTTCATAAAAGCCATTGGT
GTTGGACTAGGATTTGAATTGCAGCGGCTTGAATTTGATCTATCTCCATTAACTTGGAT
ATAGGCCAAGTTTATAAAGAAACACGTTTATTCCTGGATGGAGAGGAAGAAAAAGAATGG
GCATTTGAGGAAAGCAAAATAGATGAGCACCATTTTGTGAGTTGCTCTTAGGAAACCC
GATGGGATCTAGACATCAGGGGATGTTCCATCTCAGGATGATTCCAAACCAACCCAGAGG
GCAATTTACTATTCTCAACTTTAATGATTTAA

Sequence 1691

GACCACGCGTCCGCCCCGTCCAGGAGCCCTAGGAGTGCTACGGGGGGCCGGAGCCTTGCCC
GGGCGCGCTGCCCCGTCCCTGGATTGCGGGCTGGACGCAGCAAGCGGGGCGCTGTGTCCCC
AAGCTCCCGTCCCTCGGCCAGGCGGGCACCACGGCAGGGGCTGAGCTACCTCATGGAAG
GGAGAGGACCGTACCGGATCTACGACCCTGGGGGCAGCGTGCCCTCAGGAGAGGCATCCG
CAGCTTTTGAGCGCCTAGTGAAGGAGAATTCCCGGCTGAAGGAAAAAATGCAAGGGATAA
AGATGTTAGGGGAGCTTTTGAAGAGTCCAGATGGAAGCGACCAGGCTCCGGCAGAAGG
CAGAGGAGCTAGTGAAGGACAACGAGCTGCTCCACCACTTCTCCCTCCTTGGGCTCCT
TCGACCCCTGGCTGAGCTCACAGGAAAGGACTCAATGTACAGCATCTTCCACAGCCC
C

Sequence 1692

ACAGAATTTAGGGGTGGGTGAAAGCACTTGNGCTTTAGCTNNTTTCATATTAAATATATAT
CTATATTTAAACATTTCATGGCATAGATGATGATTTACAGACAATTTAAAAGTTCAAGTCT
GTACTGTTACAGTTTGAGAATTTGTAGTATTACATCATTACATAAGTCATTTTAGTAACA

TABLE 1
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GCCTTTGTGAAATGAACTTGTTTACTATTGGAGATAACCCACACTTAATNAAGAAGAGACA
GTGAAAGTACCATCATAATTAACCTAAATTTTTTGTATAGCAGAGTTTTCTTGTTTAAA
AAAAAATAAAATCATCTNGAAAAGCATTTTGTACAGTTAAATGTATAATGAAGCTTTTG
CCAACCAGACTGGTGCTTAGCAACCAAATTTTTTTTTAAATAAAGCTTTTATGGCAGGT
GGGTAAATAAGGTGGCCTTCCAAATATATTGGTGTCTTGATGGAGAGTTNNTTAGTTGAA
ATGAATGTGGGTCTTTTCT

Sequence 1693

CGGTTAACATGGCCGTCACCGACAGCCTCAGCCGGGCTGCGACTGTCTTGGCAACTGTNT
TGCTCTTGTCTTCGGCAGCGTGGCCGCTAGTCATATCGAGGATCAAGCANAACAATTCT
TTATGAAGTGGCCNATCAAACAANCTGGGCCTGTTCTTGGTGTGTACATCCCCGATTCTG
GTATTAATTATCGACATGTTGCAAATACCTTTCTGTTTATAGAAGTGTCAAGAGGCTAG
GTATTCCTGACAGTCACATNTGCCCTAATGCTTGCAGATGATATGGCCTGTAATCCCTA
GAAATCCCAAACAGCTACAGTGTTTGTAGTTCACAANCAATNTGGAATAAATGGTGTAT
GGGAGAATGATGTGGGAAGGTGNNATTATAGAAGTTTNTTGAGGTAAACNGGTGGGAGAA
NNNTTTTTTACCNGGGTAATTTAANCTGNGGGAGGGANTCCCCACCCTAAGTANCTTCC
TTCGGG

Sequence 1694

GTCCGCAAGATGGACGCAGCTCTCTGACCTACGACACTCTCCGGTTTGCTGAGTTTGAAG
ATTTTCCTGAGACCTCAGAGCCCCTTTGGATACTGGGTAGAAAATACAGCATTTTCACAG
AAAAGGACGAGATCTTGTCTGATGTGGCATCTANACTTTTGNTTTACATACAGGAAAAAC
TTTCAGCCATTGGGGGGACAGGCCCCACCTCGGACACAGGCTGGGGCTGCATGCTGCGG
TGTGGACAGATGATCTTTGCCAAGCCCTGGTGTGCCGGCACCTAGGCCGAGATTGGAGG
TGGACACAAAGGAAGAGGCAGCCAGACAGCTACTTCAGCGTCCTCAACGCATTTCATCGAC
AGGAAGGACAGTTACTACTCCATTACCAGATAGCGCAAATGGGAGTTGGCGAAGGCAAG
TCCATAGGGCCAGGTGGTACGG

Sequence 1695

CCCCGCTCCGCTCGNAGCTGTCCGCGGTCTGTTTGGCCCCGAACGGCGGGCGGAGGCGCTG
ATCATGGCGACATTCATCTCGGTGCAGCTGAAAAAGACCTCAGAGGTGGACCTGGCCAAG
CCGCTGGTGAAGTTCATCCAGCAGACTTACCCAAGCGCGGGGGAAGAGCAGGCCCACTA
CTGCCGCGCGGGGAGGAGCTCAGCAAGCTGCGCCGCGCCGAGTCGGTCTGCTCCGCTGGA
CAAGCACGAGGGCGCGCTCGAGACGCTCCTGAGATATTATGATCAGATTTGTTCTATTGA
ACCCAAATTCCCATTTTCTGAAATCAGATCTGCTTGACATTTACCTGGAAGGATGCTTT
CGATAAAGGTTCACTTTTTGGAGGCTCTGTAAGCTGGCTCTTGCAAGCTTAGGATATGA
AAAGAGCTGTGTTGTTGTTCAATTGTGCAGCCTTAGCTAGCCAAATTGCAGCAGAACAAG
AACCTGGATAATGATGAAGGGATTGAAAATCGCT

Sequence 1696

TTCGGGAGTCGACCCCGCTCCGGGCCAGCCGGCTCGCCCGGGGGCCATGGCAGCAGCGG
CTACTGCAGCCGAGGGGGTCCCCAGTCGGGGGCCCTCCCGGGGAAGTCATTTCATCTGAATG
TGGGAGGCAAGAGATTAGTACCTCTCGCCAGACTCTCACCTGGATCCCAGACTCCTTCT
TCTCCAGTCTTCTGAGCGGACGCATCTCGACGCTGAAAGATGAGACCGGAGCAATCTTCA
TCGACAGGGACCCTACAGTCTTCGCCCCCATCCTCAACTTCCTGCGCACCAAAGAGTTGG
ATCCCAGGGGTGTCCACGGTTCAGCCTCCTCCATGAAGCCCAGTTCTATGGGCTCACTC
CTCTGGTTCGTGCGCTGCAGCTTCGAGAGGAGTTGGATTTCGATCTTCTTGGAACGTC
CTCTTCAATGGTTACCTGCCGCCACCAGTGTTCCAGTGAAGCGGCGGAACCGGCACAGC
CTAGTGGGGCCTCA

Sequence 1697

CGTCCGAAGGAAGGAAGGGACGGGCTGAGTTCCCCGACGAGAGACACACCAGATTTTCC
TGCAGCTTGGGGAGAGGTCCTCCAGGAGCCTTGGTCCCTCCTGGCCTGCCGGAGTCCTT
AGCCAGGATGGAGGCTGTTGTGAACCTGTACCAAGAGGTGATGAAGCACGCAGATCCCCG
GATCCAGGGCTACCCTCTGATGGGGTCCCCCTTGCTAATGACCTCCATTCTCCTGACCTA
CGTGTACTTCGTTCTCTCACTTGGGCCTCGCATCATGGCTAATCGGAAGCCCTTCCAGCT

TABLE 1
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CCGTGGCTTCATGATTGTCTACAACTTCTCACTGGTGGCACTCTCCCTCTACATTGTCTA
TGAGTTCCTGATGTCGGGCTGGCTGAGCACCTATACCTGGCGCTGTGACCTGTGGACTA
TTCCAACAGCCCTGAGGCACCTAGGATGGTTCGGGTGGCCTGGCTCTTCTCTTCTCAA
GTTC

Sequence 1698

CGCGTCCGGCCGCGCCCATGGCCCGCCGCTGCCCGGCCGCGCGGGCGGGCCCGCCACGCC
GCTGTGCGCCACGCGCCTGTGCGGCTGCAGGAGAAGGAGGAGCTGCGCGAGCTCAACGA
CCGCCTGGCGCACTACATCGACCGCGTCCGCGCGCTGGAGCTGGAGAACGACCGGCTCCT
GCTCAAGATCTCAGAGAAGGAGGAGGTGACCACGCGCGAGGTGAGTGGCATCAAGGCGCT
GTACGAGTCGGAGCTGGCCGATGCCCGGAGAGTCTTGATGAGACGGCTCGAGAGCGTGC
CCGGCTGCAGATAGAGATTGGGAAGCTGAGGGCAGAGTTGGACGAGGTCAACAAGAGCGC
CAAGAAGAGGGAGGGCGAGCTTACGGTGGCCAGGCGCGTGTGAAGGACCTGGAGTCCCT
GTTCCACCGAGCCGAGGTGGAGCTGGCAGCTGCCCTCAGCGACAAGCGCGCCTGGAGA

Sequence 1699

ACGCGTCCGGAAGAATCTACACTTCTTTGCACCAGAGTATGGAGAAGTCACTAATGTGAC
AACAGCAGTGGACATCTACTCCTTTGGCATGTGTGCACTGGAGATGGCAGTGCTGGAGAT
TCAGGGCAATGGAGAGTCTCATATGTGCCACAGGAAGCCATCAGCAGTGCCATCCAGCT
TCTAGAAGACCCATTACAGAGGGAGTTCATTCAAAAGTGCCTGCAGTCTGAGCCTGCTCG
CAGACCAACAGCCAGAGAACTTCTGTTCCACCCAGCATTGTTTGAAGTGCCTCGCTCAA
ACTCCTTGCGGCCCACTGCATTGTGGGACACCAACACATGATCCAGAGAACGCTCTAGA
GGAGATCACCAAAAACATGGATACTAGTGCCGTAAGTGGCTGAAATCCCCAGGCCCTGAT
CTGCGCTGTGGCTGTCCCTGGGACGTGCTGCAGCCCTCCTGTCCCTTCCCCCAGTC

Sequence 1700

GGGAGTCGCCCCGCGTCCGGATTTCAGTTGGTGGCGTCATAGTCTCATTACAGTGTCTAT
CTTGCCATTACCAATTTACTTGTCTCTTTGTCCCACTATTAGGGATATCTTTGGTTT
TATTGGTGCATCTGCAGCTTCTATGTTGATTTTATTCTTCTTCTGCTTCTATCAA
GTTGGTGAAGAAAGAACCCTATGAAATCTGTACAAAAGATTGGGGCTTTGTTCTTCTGTT
AAGTGGTGTACTGGTGATGACCGGAAGCATGGCCTTGATTGTTTTGGATTGGGTACACAA
TGCACCTGGAGGTGGCCATTAATTGGCACCCTCAAACTCAAACTCAGTCCATCTGATGC
CAGTGTGAGTAACTCAACTACTATGAAATTTACCTAATGTTTTAGTTTCACTTCTCT
TTTGAAGTGCAGATTCTCGCTGGTTCTTCTGAGTGCAGAATAAGTGAACTTTTTTGTTT
TGTTTTGNTTTTTTAAGAAAC

Sequence 1701

CCCACCGTCCGCGCGCGCGCCTCGCCTCGGCCGGCGCCTAGCAGCCGACTTAGAACTGG
TGCGGACCAGGGGAATCCGACTGATAAATTAACAAAGCATCGCGAAGGCCCGCGGCGG
GTGNTGACGCGANTGCGATNTNCTGCCANNGCNTCTTGAATGTCAAAGTTGAANAAANC
CAATGAAGCGCGGGTAAACGGCGGGAAGTAACTAATGACTTCTCATTAAAGGGTAGCCAAA
NGCCCTTCGTCTATCTNAATTAAGTTGGACCGCGCANTGAAATNGGATGAAACCNAGANTT
CCCACNTGTCCCTACCTACNTAATCCAAGGCGGAAAACCACAAGCCAAAGGG

Sequence 1702

CGACCACGCGTCCGGACAGATTGATAGCTCTTTCTCGATTCCGTGGGTGGTGGTGCATGG
CCGTTCTTAGTTGGTGGAGCGATTTGTCTGGTTAATTCCGATAACGAACGAGACTCTGGC
ATGCTAACTAGTTACGCGACCCCGAGGTGCCTGACCAGTTCTACCGCCTGTGGCTATCCC
TCTTCTGCACGCCGGGATCTTGCACTGCCTGGTGTCCATCTGCTTCCAGATGACTGTCC
TGGCGGACCTGGAGAAGCTGGCAGGTGGCACCAGTCCCTTCTGATACCGAGCAGAGGTGGTCTG
GTGTACCGGCAACCTGGCCAGTGCCATCTTCTGCCATACCGAGCAGAGGTGGTCTG
CTGGCTCCAGTTCGGCATCCTGGCCTGCCTTCTGTTGGAGCTCTTCCAGAGCTGGCAGA
TCCTGGCGCGGCCCTTGGCGTGCCTTCTTCAAGCTGCTGGCTGTGGTGTCTTCTCTT
CACCTTTGGGCTGCTGCCGTGGATTGACAACCTTGC

Sequence 1703

TABLE 1
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GATCGACTTCGCCTGACGGAATCCAGGGGTCGTAATATATGTAACTCGCGTCCGNGCTG
CGTGCCCAAGTAGTGGCCGAATACCTTAACGGGGCTGTGCGCGAGGAGAGCATCCACTG
CAAGTCGGTCGAGGAGATCTTCGACGCTGGTGCAGAANCTGGCCGACCAGTCGGGGCTTGG
ACGTGATCCGCATTTCGCAAGCCCTTCCACACANGACAACCACTAGCATTACAGGGCCAGTA
GGCACCCCTTCACCAACAAGCTTGACCAAGTGTCCCGCGGAACTANCGCACCCCCGAGNA
GGGTTCAANGNATTCCTTGCACCCAGCCCAGATGCCCTGGCTTNTGGGGGGNCAAGTGAC
CCTTTGTGNAACCCACTCATTTTTTATGGCAAGGTGAGCATTNCCTAAAAACCCCTGAAA
AATGANGGGAANAACCTTCAAGGGGTTTTTACAGGGCCCTTGGTTTTTTTAAATCCC
CAANATTTGGATAATAAATGGAATCCTCAAAAACACAAGTGGAGGAAGGNTCTTGAAAGG
GC

Sequence 1704

TCGACCACGCTCCGGCCGGAGAACTTGAGCCGGCTGCCCGCCACGGTGCCCGAAGC
CCCAAAGGCTGGAATTAGGGGCTAGAAGTCTGGCACCCACCGCCTGGCCAGGTGTTCTGGG
ACGCGACCAGGTGGGCGGTGCCCCGCCCCGGGAGCGCGGCTTAATAGCTGAGAGCCCGG
GGGCCAGGCCGNGGCTGCGGCCAGGCAACGCCCTGAGGGTGGCCACGCTGNCAGGTGTT
CCTCTCCCCGGGACTATGGGCAAGGGCCCGGGGCGGGGAGGGCGGCAGGTGCTGACACT
GGAGCTGCGCCGAGGTGCGGGAACCTCGGCCTCCTAAGACTGAGGACACTCGCCTGCTGG
GCCGNGCAGCTGTGCGGTGCCCTCCGGGACGCAGGGGGCGCTGCAGCCACGCTGGGTCA
GGCTCCGAAGGGCCCTCCCAACCCGGGGA

Sequence 1705

CGCCACGCGTCCGGAAAGATGGAGGTGTGGGGACAGGAGCTGGGTGTGCTGGGGACTGGC
CGCGGACCCCTAACCTGTGTCTCCGGTCTCCCTCCGGGAGCGGCTCAACCCAGCCCATCG
CTCTGGCCCCGTTCTGGCCCTGCAGGGTGGTGGTTGGGACGTTGAAATGAGCGCGCGAGT
GGTACGTCTCTCTCCGCGCTCACGCCCCCTCCTCACCGTGTTTCCCGCCAGGACCATC
AGCACGTGCCCATCGACATCCAGACCAGCAAGCTGCTCGATTGGCTGGTGACAGAAGGC
ACTGCAGCCTGAAATGGCAGAGTCTGGTGCTGACGATCCGCGAGAAGATCAATGCTGCCA
TCCAGGACATGCCAGAGAGCGAAGAGATCGCCAGCTGCTGTCTGGGTCTACATTCAT
ACTTTCACTGCCTAAGAATCCTGGACCTTCTCAAAGGCACAGAGGCCTTCCACGAAGAAT
ATTTTTGGC

Sequence 1706

TCGCCNCGCGTCCGCTGAAGCAAGAGAATCACTTGAACCCAGGAGGTGGAGGTTGCGTGA
GCTAAGATCGCGCCACTGCACTCCAGCCTGGGCGACAAGAGTGAAACTCCGTCTTAAAAA
AGCCCATGGCAGGCTGGGCGCGGTGGCTCACGCCTGTAATCCAGCACTTTGGGAGGCCA
AGGTGGGCGGATCACAAGGTCAGGAGATCGAGACCATCCTGGCGAACACGGTGAAACCCC
GTCTCTACTAAAAAAAATACAAAAAATTAGCCAGGCGTGGTCTGTTGGGCACCTGTAGTCC
CAGCTACTCAGGGGGGCTGAGGCAGGAGAATGGCGTGAATCCGGGAGGCGGAGCTTGCAGG
GAGCCGAGATAGTGTCACTGCACTCCAGCCTGGGTGACAGAGCGAGACTCCGTCTCAAAA
AACAAAAAGCCCGTGGCAATTAATGGTAAAGGAAACCCGGCTTTTAGTGTAAGAGGTAA
CATAA

Sequence 1707

GCGTCCGGCCTCCAGCAAAGCCCATTCAAGTCAGCTCTGCAGGCTCATCTTACAAGAATAA
TCCCTTTGCCAGCTCAATCTCCAAACATGGGGTTTCTTCTGGCAGCTCTTCTCGGGAGG
AACACAGTCCAGAGTTCTGTTTCTGGGAGCCTGGTCCCTGGCATAACAGCCTCCCTCCGT
GGGACAGGCCACCAGCCGACCCGTCCCAAGTTCAGCAGGGAAAAAATGCCTGTTTCCCA
GAAGTTGACTCTGGTAGCCCCCTCCAGGCGGTCCAAACGGAGATTCCAGTGGTGGGACCCA
GGGAGTGGCAAAGTTGCTGACCTCGCGTCCCTAAAGCCCTCTGCAGTTAGTAGTGTGA
CATCGTCACTCCTTGTCAAAAGGAGGCGAGTGGGGACTGTGCTGCTGGCCGGCTCCTC
TTTGATGGCTTTACCCTACAAATCCAGCAGCCCAAAGCTGTCTGGGGCCATGAGCTCGAA
CTTCTTGGGAAATTATAC

Sequence 1708

CACGCGTCCGGGAAGCGGTGCGCTCCGTACCAACGGGAGTGCGGGAATCCGCCGTTTGCG

TABLE 1
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CTGAGGCAATGGCGGCAGCTGCGCCGGTGGCCGCGGACGACGATGAGCGGCGGCGGCGGC
CGGGGGCTGCACTGGAGGACTCCCGGTCCCAGGAAGGGGGCAAATGGTGAGGCCGAGTCAG
GTGAGCTCAGCCGGCTTCGGGCTGAGCTGGCAGGCGCCCTGGCAGAAATGGAAACCATGA
AGGCTGTGGCAGAGGTGAGCGAGAGCACGAAGGCCGAGGCTGTGGCTGCGGTGCAGCGGC
AGTGCCAAGAGGAGGTGGCCTCGCTGCAGGCCATCCTGAAAGACTCCATCAGCAGCTATG
AAGCCCAGATCACCGCCCTGAAGCAGGAGCGACAGCAGCAGCAGCAGGAGGACTGTGAGGAG
AAGGAGCGGGAGCTGGGCGCGCTGAAGCAGCTGCTGTCCCGGGCCTACCCCTGGA

Sequence 1709

CACGCGTCCGCGGACGCGTGGGTCCGCGGCGGCGTCCGGGGTCTCCAGTAGGGCTGACGC
TCCGGTGCTCGCAATCCCCCGCTCGGCTGGCAACGGGCGTCCCTCCACTCCCCGAGT
CCCCGGCAGCCGCCGCCACCCAGCGCGCCCGATCTGGCCCCCTGCCCCGCAAGATGG
CTGCCGTACGCCGGGCCCCGAGTTATTGCCGCTGCCTGGTGCGCTTCTCCGACCGAGAAC
TCTGCTAAGCTCCGCTGCAGAGACAGGCAGGAGTAGACACCCGGACACCCAGCACCCCTC
CTTCGGGGGGCGGTGCAGAGGGGGCACGGAGAGCCCTCGAGCGCAGCAGGCCGCCCGC
CAGCATGGCAGAAGCTGAGGAAGATTGTCATTCTGATACTGTCAGAGCAGATGATGATGA
AGAAAATGAA

Sequence 1710

ACGCGTCCGCGCAGTGGCCTTCCCGGTTGGCGCGCGCCCGGGGCGGCGGCTGGAGGAG
CTCGAGACGGAGCCTAGTTATGTCTGGGAGGCGAACGCGGTCCGGAGGAGCCGCTCAGCG
CTCCGGGCCAAGGGCCCCATCTCCTACTAAGCCTCTGCGGAGGTCCAGCGGAAATCAGG
CTCTGAACCTCCGAGCATCCTCCCTGAAATCTGGCCGAAGACACCCAGTGCGGCTGCAGT
CAGAAAGCCCATCGTCTTAAAGAGGATCGTGGCCCATGCTGTAGAGGTCCAGCTGTCCA
ATCACCTCGCAGGAGCCCTAGGATTTCTTTTTCTTGGAGAAAGAAAACGAGCCCCCTGG
CAGGGAGCTTACTAAGGAGGACCTTTTTCAAGACACACAGCGTCCCTGCCACCCCCACCAG
CACTCCTGTGCCGAACCCTGAGGCCGAGTCCAGCTCCAAGGAAGGAGAGCTGGACGCCAG
AGACTTGGAAATGTCTAAGAAAGTCAGGCGTTCTACAGCCGGCTGGAG

Sequence 1711

CNCGCGTCCGAAGGCACAGGCGTCTTGCTCTGTTGAAGCAAGTCAGTATCCGAGAAAACT
GCTGTTCCCTTTGTTGTGATGAGGTAGCAGACACACAATTGAAGCCATGTGGACACAGTG
ACCTGTGCATGGATTGTGCCTTGCACTGGAGACCTGCCATTGTGTGCGTAAAGAAATAG
TATCTAGAATCAGACAGATTTCTCATATTTCTATGACACATGTGAAGAGGCATCGTGGACT
TTTTTCTACTCAATTCCAGCCAATGTTGAAAAGAAAAAGAAAAAAACTCTAATCAGT
TGACACACATTGAAACTTATAGCCATGGCCAGATTTTATGCTAAAAATGGTAGTTTGTG
AAAGACAAAATTCTCTTAGAATCTAATCCAATTGCCAGCCCTGAGAAAAATCCCTTTTAA
GGCCAAGGGAAAGCTGAATGCTAGCAGCCAGGCCTGTGGTACTTCCATGAGAAACCATAG
CAGGACAATGCCCTC

Sequence 1712

CCACCGTCCGGGCGGCCAGAGGTGCGAGAAGGCCGAGGAGAAGGCCAAGGAGATTGCGAA
GATGGCAGAGATGCTGGTGGAGCTGGTCCGGCGGATAGAGAAGAGCGAGTCGTCGTGAGC
GCGGTCCGGCGGTTTCAGCCAATGGATTCTGGTCAACTGGTGGAGATTGGCTGACACCCT
GGAGAAGCCGAAACCAGAGAGCCTTTTGTCTTTCTCTTTTCTCTGTCTATGCTCTGTCTC
ACTTAACACTACGTTTTCTGCTATGGTCTGTGGTTGATGACCTCAATATGAGTTTCGATT
GTTAACCGTGTTTTGTTTGGGAAGTAATTTTGTGTTGAAAATGCTCTCACATACAGGAAT
TAGGGCCTAGATTGTAAGCTCTTGACAGCAGTCACATTTGTTCCCGGGCTTTGGTGGTTAT
TTTCTAAATTTTGGAGTGCCTTTGCTATTTCTTGTGTGACCTGATAGCTTCCCCTG

Sequence 1713

GCGTCCGAGCCTCTGGGGGTGGATCCTGAAAGGTGGTCCAGCCGCCTGGCCCTGCGTGGG
ACCCTCCACCTGGCAGCAGGGTCTCGCTCTGTACACAGGCTGGAGTGCAGTGGTGTGAT
CTTGGCTCATCGTAACCTCCACCTCCCGGGTTCAAGTGATTCTCATGCCCTCAGCCTCCCG
AGTAGGCGATTACAGGTGGTGACTTCCAAGAGTGACTCCGTCCGAGGAAAAATGACTCC
CCAGTCGCTGCTGCAGACGACACTGTTCTGCTGAGTCTGCTCTTCTGGTCCAAGGTGC

TABLE 1

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CCACGGCAGGGGCCACAGGGAAGACTTTCGCTTCTGCAGCCAGCGGAACCAGACACACAG
GAGCAGCCTCCACTACAAACCCACACCAGACCTGCGCATCTNCATCGAGAACTCCGAAGA
GGCCCTCACAGTCCATGCCCTTTTCCCTGCAGCCCACCCTGCTTCCCGATCCTTCCCTG

Sequence 1714

GTCGCCACGCGTCCGCAGAAGATTGACAAATCTGAGGGCCGCTTCCATGTCCAGAACCTT
AGCCAGGTGGAGCAGGATGGGCGGACGGGGCATGGA CTCCGCAGATCTTCCAAGTTCTGC
TTGAAGGAGCACAAAGCCCTCAAGACGTTAGGCATCATCATGGGCACTTTCACCCCTCTGC
TGGCTGCCCTTCTTCATCGTTAACATTGTGCATGTGATCCAGGATAACCTCATCCGTAAG
GAAGTTTACATCCTCCTAAATTGGATAGGCTATGTCAATTCTGGTTTCAATCCCCTTATC
TACTGCCGGAGCCCAGATTTCAAGGATTGCCTTCCAGGAGCTTCTGTGCCTGCGCAGGTCT
TCTTTGAAGGCCTATGGCAATGGCTACTCCAGCAACGGCAACACAGGGGAGCAGAGTGGA
TATCACGTGGAACAGGAGAGAAAGAAAATAAAC

Sequence 1715

CCCCCGTCCGCTTTTGTNATCTAAAGGCTTNA GTCCCATTTTTTATACGTTGTATTTT
AAAAACGTTTGAAAGGAGTCTTACACCTGTATCATGAAACTGAATCCTTTTGAAATACC
ACTATATGAAGAGAGAGATGAAATTTAGTGAACAGAATTGGAAAAGGTGCTCATAATTTG
ACTATGCAAACCTTACCCAGTCTCTAAAAAAGTAATTTAGATTTAAAGTTCTTTGATGTA
TTTGATTTTCTAAATCTTTATGGTTATGATTTGGAATAAAATGTGCCTAATCCTGTGTTA
CATTTCTGTTCTTAAATCTGAATGCCTTCTCATTTAATTCTGAGGAAATATCACACAAGTG
TCTTCATTGACCTTGAAGAAATGTATATACAGTTGCCTTATAAAACAACATAAATTTAGA
CCATAACTTTTATAGAGAAAGGGTTTTGTCAAATGTTTTCTGAAAATCTGAGTAATTCOA
AGCATGCCTCTGCCCTTTAATA

Sequence 1716

NGTCGCCACGCGTCCGGCGCTCTCGGCCGCCGCCGCTCTGCGTGGGGCCGGCCGGGAGGG
CCTCGGGGGACTGACTGACAGAGTTTCACTCCTGTTACCCAGGCTGGAGGACAATGATGT
GATCTCGGGTCACCACAACCTCCGCCTCCCGGATTCAAGCGATTCTCATGCCTCAGCCTC
CCGAGTAGCTCAGATTACAGGCATGTGCCACCACGCCCGGCTAATTTTGTATTTTCAGTC
GAGACGGGGTTTCCCATGTTGGTCAGGCTAGTCTTGAATCCCGACCTCAGGTGATCTG
TTCGCCTCGGCCTCCCAAAGTGCTGGGATTACAAGGCGTGAACCACTGCACCCGGCGAGG
CATTTTTTACTGTCTACAGAACTTATTGTAATTCATTTTCTCACTCCAAGTAGTAAG
AATTATACCAAATTGAAAAGATATGAATGAGTATCCTAAAAAAGAAAAAGGGA

Sequence 1717

CCGAGGONCTGATAAGCCNTGGTAACGGGAAACACAGCTCTAACCTCACCTCATTCTCCA
GGTTACAAAGGCCATGTGCCCTTTGAATCTGGCAGAGAAAGTTTCTCGTTGTAAGTAT
TTGCATCTACTTCAAGCCAGATTCTTCTGCCTCTTTCTCCTTTCCAGACCCCTACTCTGT
GCAGTGCTGACCACAGCTAGAGCCACCGCCCCATTGCTCAACCAGTATTTATTTCCCTAA
ACGACCCTTCTCATATTCCTTCCCTCCACCTCTCCTTACCAAGCACCCAAAAGAGGAT
TTAGAACTAGCAGGGTGGACATCATTCTGGTTGTTTCTACTTTTCTCTGCCTAGCACAAA
ATTGGGAGAAAACCTGGAGCCTCCATCCGCAGTCACACGTGTACAGATCTGGGNGATTGG
ATGTAGGCTTTTCTAACTTCTCTCAGAAGCTTCTACA

Sequence 1718

CGGACGCGTGGGTGCCGCCGCCGCCGCTCGCTGTGCTAGTCGCCGCCGCCGCTGCCGGAGA
AAGAGCACGAGCGGGGAAGCCCCAGAGTGAAATCTAGCATCCTGCCGGCTGGTCTGCCCG
CCCTCCTTCTTTTCCCCCGGCCCCNGTCCCCTCCNCCGCAGGTGCCATCCGTCGCC
ATNCGCCTCTCTACCCTCNCATCCCCAGGTGAGGGGGTGAGTTCAGGAAGCGGNACCC
CNAGGAACCCANCAGGGTCACCATTTGCAGCGCAACATGGCAGGAGCTGGAGGAGGGAAT
GATATTCAGTGGCGTTTTTTTTCAGGTGAAAGGAGCAGTATGATGATGATGTAGCAGNAAG
CANGATATNATTTCTACAGTANAATTTAATCNTTTCTGGGAGAAATTCTAGCAACANGAA
GATAAAAGGTGGGTAGAGGTTGTCATTCTTTCAACAGGGAGCAGGGAGAAC

Sequence 1719

TABLE 1
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TCCGGCCGGCCAGCGTCATCACCATCGTCAAGTCCACCCCGGGCTCGGGGTCTGGCCCCG
CCCACGGNCCGGACCCCGNCCACGGCCCCGGCACNGCNGCTCCTAGTGCCCCGCCCGCCA
TGCCTCANCCACGCCCCACCGGCCATAGNTNCCCTCCCCCAAAGNCGNCTGAGGCGCATG
NCTTCNTGNGACNCAANGNTCCCATNTCTATTGCAGGCAACATGGCCATTCCCCGAAAC
TAAAAAGCAGTTGGGGNNGGNGAAAGTACNANGTGGAAAACCCAGNNATCACCGGNANTG
GNGGGAAAAACAANGGCCNGNAGGGACACATTTCCAACTTTAAGCTGGGCNAGTGNNTGGG
GAACCAAAAAACCTGGGGNNGNCCNCTCANTGGCANGGCCNCTGAGNNCNCAGCNCATGN
GCATTTNCAGGGNNGAACCAGNNGGACAAGGGGGACCTCAANAAAAATGNTGGNTGGGG
ANGGGCCCANCTCCTGGGCNNGGGGAAGAACCCGNATTCTACNAGCAAAGGGGGANGGG
GGGGACNCAGCAAAGGCAATCANGGGAAGAAGGAAGATAAGGGTCNACCANCGGGAATNG
GCAAAGAAANGGGGAA

Sequence 1720

CTGANGCTCGTTTTCTGAAATTAAGCTTCAGAGGGAAGCCCGNGAAACACAGGAGAGCG
AGCGCAAGCCCCACCATACAAGCACATCAAGGTGAATAAGCCTTACGGGAAAGTCCAGA
TCTACACAGCGGATATTTTCAGAANTCCCTNAGTGCAACTGCAAGCCCACAGATGAGAATC
CTTGTTGGCTTTGATTGCGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCGCANG
TGTGTCCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTNCCCAGAGA
CCAAGATCATCAAGACAGATGGCAAAGGGTGGGGC

Sequence 1721

CATGGCTTCTGCGAGAAAAAGTGATTTAGGCAGACGGAGGTTTTTTCTCAATCAGAGGCTT
TCAGTAACTCTGCTGATGCACAGAGAAGAGACTTCCTCAGCCTGCAGGCTACAAGAGCCA
ACTGTTAGTGCAAAAAAGGACTTTAATACAAATTTCTTATTCCAGAAATTTTGTTCAGG
TCTGGACAAGCTGAGAAATTTATCATTGTTTTTCGAGTTTTTAAGATACCCACTTTTTCT
GAGAGGTATGGGTGTGTGTGCAAGGCACACACATACAGTCTTTCTGTACATGCATGCATA
TTTATGCATGTACAGGGAAGTATCCAGACACCAAATTTTAAATAAATGAATCCCCAAA
GGGGAGTCTTGACCTGAATTAAGGCTGTTGTTTATAGGGAAGCCAGATATAATTGATGNT
GAAAAANAACTAATTTTTATACTTAATCACCGGCAGNTANCGGGGGCANGGGGGAAAAA
GTACAGANGGGGTGATTTTTTGGTTTTTTCT

Sequence 1722

TCGCCACGCGTCCGCTCTTAACACAGAGTCTGCAGCCCCTAACTGACACCCTGTCCTTCC
TCCTAGGAAGTGCTGGACTCCCTGGTCAGCAATGTCAACATTGAGCTGCTCAATGCCCTC
CGCTACCATATGGTGGGCAGGCGAGTCTGACTGATGAGCTGAAACACGGCATGACCCTC
ACCTCTATGTACCAGAATCCAACATCCAGATCCACCACTATCCTAATGGGATTGTAAT
GTGAAGTGTGCCCGGCTGCTGAAAGCCGACCACCATGCAACCAA

Sequence 1723

ATCCGGTTCGCCCCNCGTCCGGGCGGCCGAGGCGGAGGCAGCGGCGGGGATGGCGGAC
GCCAACAAGGCCGAGGTGCCCGGGGCCACTGGTGGCGACAGCCCGCACCTGCAGCCCGCA
GAGCCGCCGGCGAGCCGCGGAGAGCCGCACCCCGCGGAGGCGGAGAAGCAGCAGCCG
CAGCACAGCAGCAGCTCCAATGGCGTTAAATGGAGAATGATGAATCAGCAAAAGAAGAG
AAATCTGACTTAAAGGAAAAATCTACAGGAAGTAAGAAGGCCAATAGATTTTCATCCTTAT
TCAAAAGACAAGAAT

Sequence 1724

GTCCGCCNCGCGTCCGTGCTTTTTTTCGACATACTGGTTTTTCTTTCTGTTTTCTTCTCT
TTCTTCTATTTCTTGTTGATATTATGGCTAATAACACAACAAGTTTAGGGAGTCCATGGC
CAGAAAACTTTGGGAGGACCTTATCATGTCTTCACTGTATCCATGGCAATCGGGCTGG
TACTTGGAGGATTTATTTGGGCTGTGTTTCAATTTGTCTGTCTCGAAGAAGAAGAGCCAGTG
CTCCCATCTCACAGTGGAGTTCAAGCAGGAGATCTAGGTCTTCTTACACCCACGGCCTCA
ACAGAAGTGGATTTACCGCCACAGTGGCTGTGAACGTGAAGCAACCTCAGCCTGGCCA
GTCTCACCTTCCAGCGACAAGCTTCCCTGGAACAAGCAAATTCCTTTCAAGAAAAATCAA
GTTTCAGAGCTTCTACTTTCCATCCC

Sequence 1725

TABLE 1

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AATNTGCCAGCCTTTATTGAGCTTTACAACCTGATAGTTGGCAGTTAATTCAC
AGTTACAGATAATGCTTTTATTACATAAATATACCAAGTAGTACCCTCTTATTGTATTC
ACTTCATCTATTTTCTTAGAATACTTGCAATTTCTAATGACCCCTTCCCTTTCCCTCTG
CTGCCCTGTCCACCCTCTTTCCCTTCTAACATCCTTAGAGGGATGAAATCTCAGCATAT
GTTGCAGGACACCAAAAGGAAGAAAACAATCAAGCAAATAAAATAAACAGTCAAACAAAC
CAGGAGTTTAAAACAACAACCCCAACAACAGAAGCCTTGGCAAAGAGGAATGAGTGATCA
GCAAGTGAACACACTCTATGTCAACTCTCCTTTTATCCAGCTGAGATTTTATGGTAACC
TTTAATTTAA

Sequence 1726

CCNCGCGTCCGGAGCCGAGAGTGTGTGGAGCAGTTACAGCTGGAAGACCGGGTCTCTGC
CTCCACAGTAGATGGCTGAATCCTCTATGCGGGACTGGCAAATGGCACTGTGGTCACCTT
CAACATAAAGAACAACAACGACTTGAGATCTTTGAATGCCATGGCCCTCGGGCAGTCAG
CTGTCTTGCTACAGCTCAGGAAGGTGCCGAAAACCTGCTGGTCGTGGGGTCTTATGACTG
CACAATTAGTGTACGCGATGCCCGGAATGGACTGCTCCTCAGAACTCTGGAGGGCCATAG
CAAACCATTTCTTGCATGAAGGTGGTGAATGATCTCGTGTTCACTGGCTCCAGTGATCA
GTCAGTCCATGCTCACAACATTCACTGGTGAGCTCGTGCGGATCTATAAAGGTCAAA
TCATGCAGTGACTGGTGGTGAATATCCTAGGAAAAGTGATGGTGACTGCTTGCCTGG

Sequence 1727

CNCGCGTCCGGATNAATATTTTCATCCCTGAGGTTAACAATTACCATCAAAATGTTTTGT
GGAGACTATGTGCAAGGAACCATCTTCCCAGCTCCCAATTTCAATCCCATATGGATGCC
CAAATGCTAGGAGGAGCACTCCAAGGATTTGACTGTGACAAAGACATGCTGATCAACATT
CTGACTCAGCGCTGCAATGCACAAAGGATGATGATTGCAGAGGCATACCAGAGCATGTAT
GGCCGGGACCTGATTGGGGATATGAGGGAGCAGCTTTCGGATCACTTCAAAGATGTGATG
GCTGGCCTCATGTACCCACCACCACTGTATGATGCTCATGAGCTCTGGCATGCCATGAAG
GGAGTAGGCACTGATGAGAATTGCCTCATTGAAATACTAGCTTCAAGAACAATGGAGAA
ATTTTCCAG

Sequence 1728

TCGACCACGCGTCCGATCCTGGATCTGGAGAGAGAGCTCTCCAAGCAAATCAACGTGTGC
CTCTGAGCCAGATGACGGGGTGGGACCCCGTTAGTAAGGACCGGGCGCCAGTGCGTAA
GGCGGTGCCCTGGTGACCAAGGAGAGCCAGACCTGTTGCTCAGGCCGAGCTCCTGGTTGC
CAGCGAGTTACCACGGGACCAGTCGCGTGATGGCTGAGACTCATTCCAGTTTCCAGGG
CCCGGTATTTGGACACTAGTTGCCAAGTCTGGGGCCTGGGGATTTTAGGGACCAGCGGTT
GTGACCATCTTTCCTGAGCACCAAGGGCTTCCCCTTTTGTGCCAAAAGGTAGTTCTCG
CGCTTGCTAGGCTGGCCTCTCTTGCCTCCCCTTGGCCGGGGC

Sequence 1729

TCCGAAACACCTGTCAATTTACACAAATGCGTTTTGAATGTCTGAAAGACAGCTCCTGCC
CTTAATTTAGATGTAAACCATTTAGTTTCAAACCTAACCACCTGATAAAATCTATCAACAT
TTTATCATGAACTAGAGCAGATGTCTGTTATTTGATGTCTATGTTATTTGAGTTTACTGT
TTAATAAGTGAATTCATATCAATTAATCCTGCTAACAAATTTGACACTTAAGGTGATTCT
GAAAATCCTTTAACTTAAAGTAGATGGAATCTTAAGTATGGGGCCTTTTAGTGTCCGTA
AAGAAAACTGCATGCAACAAAATATAGCAGGTCCTCACTTGTTGAGATTCATGGAAATT
GTGACTTTAAATGAAATGACATGGCTGGGCATGGTGGCTCACACCTGTAATCAGCACTTT
GGGAGGCCACGGCGGGTGGATCACGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGG
T

Sequence 1730

CTGNAGATTAAATTGGTCCAGAAACAGTTATGACCCTCTTTATACTGCCAAGAAATACGC
AGTCCCAGCCTTGAAGCACACTGTGTAGAATTTCTACCAAACATCTTAGGGCAGATAA
TGCCCTTTATGTTACTTACTCAGGCTCGATTATTTGATGAACCTCAGCTTGCTAGTCTTTG
TCTAGATACAATAGACAAAAGCACAAATGGATGCAATAAGTGACAGAGGGTTTACTGATAT
TGATATAGATACACTCTGTGAGTTTTAGAGAGAGACACACTCAGTATTCGAGAAAGTCG
ACTTTTGGAGCTGTTGTACGCTGGGCAGAAGCAGAATGTCAGAGACAACAATTACCTGT

TABLE 1

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GACTTTTGGGAATAAACAAAAAGTTCTAGGAAAAGCACTTTCCTTAATCCCGGTTCCAC
TGATGACAATTGAGG

Sequence 1731

ACCCCGCGTCCGAGCAGCCTCCAGTTGCCCTACTTAGTGGCTTGCCCTCTGCCTGCCTC
AGCTGCTGCCTGACCGGCTGGGGGAGGCACTGGCGGGAGGCCTCGGGCTCCCCTGGAAGG
GCGCTGGGCTGGCGGGTCAGCTGGTGGTTCTTAGGTTTCTTCTGTTTGTTAAAAGGGAC
AATGTGGCCACTTCTCTGTGGAAGGGAGTTGGTTGGGGGGTTGAGATGGCCCGTGTTC
TAACTCAGTTTCTGTTTTGCACGATGTAAAAACCCTGTCTTTTGCACGATACAGCCAA
AAGTATTGGCTGATTTCTTGCTGAGTGCCCTCTTAGTTGGTGTGTGAGGTCTTGGTGGG
TCAGGCCAGCTGTTTGCGAGTGTGGGAACCATAGGTTCTGTCTTTGTCTCTTCTTTCA
CCTCATTCTGGTAGCAGCATAAAGGTTAGGCAATCACTGGGACCC

Sequence 1732

GCAAATCATACATTGCATTCCCCAAAGCATCTGAACGTACTTCTAGAAAACAAACCAACC
AAAAGGGAAAATATGCATGCTTTTGTAACTAAGTGGTCTTGAAATCTTTTAAAGG
GAGAAAAATCTCAACCAAAGTTATGCTCATCCAGACAAGCTGACCTTTGAGTTAATTTCA
GCACAACTCATTCTTCAGTGCCTCATGACTGAAAACAAAAACAAAAAAGAAAGCATCT
TCNCAATGAAGCTTCCANATAGCACCGTTTGTCTAAAAGATACATTCTCATTGTTTTCCA
ACAGNGATGGCTTCCACATAANGGTTAAACAACTGGGNGCTTGAAATAATTTNTNACN
GGTTACTTNTTCGCATTTTTTNGAACNAAGGAAANGGATTCCCTTTTTTAGGGGGGAA
GAATTGNGNCAAGTTTAAAAAAAAAAAAAAAAAAAAAAAAA

Sequence 1733

CGCGTCCGAATTTAGGAAGACCCCGGCGACCTGTTCTCACCCCGCTTCGCCCTCACAC
TTTCGGGATGTCTGCGATTCTGCTGAGGAGAGCGACCAGCTGCTGATCCGACCCCTTGG
AGCTGGGCAAGAAGTAGGAAGATCATGTATTCTCGAGTTCAAAGGAAGAAAAATAAT
GCTCGACTGTGGGATCCACCCTGGCCTAGAAGGAATGGATGCTCTTCTTATATTGATT
AATTGGACCCACCTTGGAATTGNACCTCCNANTAANTNANNNCATTTTCATTTTGAANC
NTGGGGGGGCTNNTNCCCCNNGGTTTTTCNNAANNNCCCTTNAANGNNAAAAAATTT
TTTTNTTTTTNTCCANAAAAAATTTTTTTNAAAAANNCCNCTNNTNTNAGGGGNTNT
TNAAAAAATTNCCCCAAAAAANNNNCCCCCTTTNTNTNTTTTNAAAAAAAAAAAAAA
AAAANATNGNCCCNNAATTTTTTTTTTATTTTTNANNAANNAANNTTTTTTTN
AAAAANTNTATNTTTTTTTTNTNNTNANNNGTGNNNNCCCNNTTTTTTTTTTTT

Sequence 1734

CCACGCGTCCGCTCCCGCCAGGCGCTTCTCGGACGCTTGCCAGCGGGCCGCCGACC
CCCTGCACCATGGACCCCGCTCGCCCCCTGGGGCTGTCGATTCTGCTGCTTTTCTGACG
GAGGCTGCACTGGGCGATGCTGCTCAGGAGCCAACAGGAAATAACGCGGAGATCTGTCTC
CTGCCCTAGACTACGGACCCTGCCGGGCCCTACTTCTCCGTTACTACTACGACAGGTAC
ACGCAGAGCTGCCGCCAGTTCTGTACGGGGGCTGCGAGGGCAACGCCAACAATTTTAC
ACCTTGGGAAGGTTTGCNACNATCTTTGTTTGGANGANTAAAAAAGGTTCCCAAAAT
TTCCCNCTTTNAAAAGANNNTNGNGACNNNCACTNNGGGGGGGGGCCCCAAAAAAATTT
TTTTTTNTTAANNCCCCCGGGGNNGNAAAAANTTTTTTTTGGGGGGGGNCCCCCCC
NNGGGNNAANNNNTTTTANAAAAAATTTTTTTTTNTTTTTCCCCAAAAAAATTTT
T

Sequence 1735

GCGTCCGAAAATACAATACACGGAATCTTTTCGAGGCCCTGTAATTGGAATGAGTCCACTT
TAAATCCTTTAACGAGGATCCATTGGAGGGCACTTCCAGAATACCTCCTCCCCAGCGCC
CGCTGCCAGCCCCACACCAGGTGTGAGAACCAAGGTCTGGTGGAGGCAGCTCCAGGCACT
GCCAGTCCGACACAACCTGCAAAAATCCATTAGAGCCACTGCCCCAGAGATG

Sequence 1736

CGAACCTCCTGGTTCCAAGTGGGAGACATGGTGTGTCGGAGCTAGCGGCGCGCCTCAAC
TGCGCCGAGTACAAGAACTGGGTGAAGGCGGGCCACTGCCTGCTACTGCTTGCGCAGCTG
NCTGCAGGGTTTCGTCGNCCGCGNAGGTGCTCTCCTTTCCACCCGCGGCCTACTCGCCGCA

TABLE 1
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GCCCCCGGC

Sequence 1737

ATCCTTTTGCCTAAAGATGTAAACAAAACCTCAAGACAGAAGGAATCAGGGAATATGTGCT
NTTGTGNGCATCTTGTTTACATTTNNGGATCAANTGATGGCAAAAGAAGTAATGAGACCA
CTNNAAATTGTTTTNCANTTGNNTTTAAANACCAGGGTTCCTCATTTTCTTTGATTTTG
NAAGTTTAAACAATTGACCTTCTTAAGNGACATTCTTTTCAAAAAAGANANGTAAANCA
GGNGAAATGAAGGGTGGNTGGGGAAA

Sequence 1738

CCGGCTCATTCCCTGAGGCCGGCCCGCTCCCGTCAGGGCGCCGCGCGGGGTTAGCGCGG
GGTCAGCGGAGGTCAGCGGGGGTCAAGCAGCAGCGGCTCCGAGGGCGCGGCGGACGCAGGA
TGTACACGCTGCTGTCGGGCTTGACAAGTACATGTTTCAGAAGGACGAGTACTGCATCC
TGATCCTGGGCCTGGACAATGCTGGGAAGACGACCTTCCTGGAGCAGTCGAAAACCCGAT
TT

Sequence 1739

GTCCGNCCACGCGTCCGATTTCTTGTTGTGCTTTGAAAAAGTTTCAGCTTGCTGTCTCTT
TLAGTGTTTTAAAGAAGTGTTATACAAAGCATTGTTTGCAAAATATAGGGAGGATAATGG
GAGTCCCACTTTAANTNNGGAANTCNTTGGNGANCTTNTTNATCCAAGGTTTANTCAA
GCCTTCNTTTTCCAACTTTTAAAAAATTTTTGTTAAAAAGCCACCCTTTGCTTTANGA
AAAAATTTTAAAAATATTTTANTGTTCTTGCNACCAAATTTGTTCTTAAAAAATAATA
AAAACCTTGNTGGCAAATTCNTTTGGTCNNTTTAAAAAATAAAAAA

Sequence 1740

ACGCGTCCGCAGCCATCTTGGGATCTGGGCAAGTGAGCGAGCTCCTTCCTCACCGGGCTG
ACTAGCCTCTCCTTTCCCTGTCCCCCTCCATCGCTGCTCTGCAGGAAGCCAGCCCCCAGG
GCCAGTCCCGGAGGGGCTGATCCGCATCTACAGCATGAGGTTCTGCCCTATTCTCACAG
GACCCGCTCGTCTCAAGGCCAAAGACATCAGACATGAAGTGGTCAACATTAACCTGAG
AAACAAGCCTGAATGGTACTATACAAAGCACCTTTTGGCCACATTCCTGTCCTGGAGAC
CAGCCAATGTCAACTGATCTATGAATCTGTTATTGCTTGTGAGTACCTGGATGATGCTTA
TCCAGGAAGGAAGCTGTTTCCATATGACCTTATGAACGAGCTCGCCAAAAGATGTTATT
GGAGCT

Sequence 1741

CANCGCCCCGGCCCGNTCAAGCAGCNTAATAAAGCTCATANAGGCGGACNNGGCATCNGGG
TCTNNGGATCTGCACAGCGGGACTGGCATAGGGCCGTCTGGCACTGAAAACCCTAANCAA
GAAGGTGTGAAAAGAACTTNAGCNGANNCGACCNAGGACATCNCGCCAGCCAGCTCCG
AAAGCAGAAGANGGAGGCGGTTCTGGCATGAGAAAGANACAGCTGGGCTGGCNAGGATAG
GCCCCCTCCTTCATCAAGGTACTGGTGGTGGCCCTGCACAGNANAATTNTNCCTGCCAGAG
GCCATGCANCCTGCTTCAAGATAGGGACACTGGAACAGATACACTTGAATGAATTGGGGA
AACACCCCAAGAACTTTT

Sequence 1742

CACGCGTCCGTTTTTTNCAAGGGTCTATTGTTTCGATTAGTTTCCTTGACAGGAGGTAGAA
GGTTTCCTCCATCCCGAGTAATTCATAGAGTGTTTGGCTTGNCTACCTTCCTCCTGACTG
AAGTCACCTGATACTTTTTGTTTTTCAAGAAGGAAGAGAGAACCCTGTTGCCTCAGTTA
CTAGCAATGATACAATTCTCAAATCTGGTCTTTTTTTGTTTCTTTGAAATAGTTTCTCC
ATGTTGTGTGACACAGCAGCCCCCTGTCTTATCATAGTTGTCTTCCCTCCACCACCTGTAC
CAGAGATGTTGGATATGTTGGAGGTGAAGGTGTGCAAGGTTTTAACTAACTGTTCTAAT
TAAAGGATTCTGCAGGAAAGAACATGGGTTTACAAAAGAGAAGCTTTTGTATTATTAGTA
ATTTTTTTCTTTGATGAATTTATGTGCTTAGTTTGGAGAATCGAGAGTTGGCTGGGAAA
AGATTCTGAGGAGTTAAGGGACTCTGGTGCTGTTTGGGAA

Sequence 1743

GTGATTAGAAGTAAGCGNTGATGAGGCTGAAGAAAAGGAAGACAAAACCTGAGTACTTGGGA
GGAACGAAGAGTAATGGGATATCCAATAAACTGAGAATGTTTCTTCACAATCTCCTTTAT
TCTTCGTTCCCTCAAGTACTCAGTTTGGTCTTCTTTCAGGTGTAGGAACGTGATAAAGAA

TABLE 1
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GTAAGCGATGATGAGGCTGAAGAAAAGGAAGACAAAGAAGAAGAAAAAAAAAAAAAAAAAAGG

Sequence 1744

CGATTTCTTTGTTGGACAACCCAGCTGGGGCTAGGAATGGTTCAGAAGGTTTAAGGCCGG
AANGGGNAATGAAGGGGCCCCGGCGCTAACCTCTAGGGACCTGTTTTGCTTCTGTTTAAA
CCAAATGGGCAGTCTGTCTATTACACACACCCTGNGTCTTCATATGTGGCTCGCCAGTATA
ATGGAATGTGCTTACAAGGGCCAGCAGGAGTGCCTGGTTCGAGACGGGAGCCCTGGGGCCA
ATGGCATTCCGGGTACACCTGGGATCCCAGGTCGGGATGGATTCAAAGGAGAAAAGGGGG
AATGTCTGAGGGAAAGCTTNNAGGAGTCCTGGACACCCAACTACAAGCAGTGTTCATGGA
GTTTCATTGAATTATGGCATANATCTTGGGAAAANTGCGGAGTGTACATTTACAAANATGC
TTTTCAAATAGTTGCTNTAANANTTTTGTTTCAG

Sequence 1745

GGACGCGTGGGTGGAAATGTAAACAAGAATAGACTGTTTCATTCTGATGGCTTTTAGTCT
ATACTAACATATTGTTTGTTCATGGCATCCGAGACTGAAAAGACCCATGCTTTACTGCAGA
CTTGAGCACTGAATCTCTTATTTCCAGCCTTGGGTCTGGGGGCATTTTGCCTCGTAGCT
GACAGACTTCTTCAGTTTTCCACAATTGAGCAAAATGACTGGCTTCGTGCTCTCTCAGAT
AATGCAGTACATTGTGTAATTGGCATGTGGTCATGGGCGGTAGTCACTGGAATCAAGAAG
AAGACTGACTTTGGAGAAATCATTTTAGCTGGATTTTTCAGCTCTGTTATTGATGTAGAC
CACTTTTTTCTAGCTGGATCCATGTCTTTAAAGGCTGCTTTGACTCTCCCGCGAAGACCT
TTCTTCACTGTTCTACTGTGATTCCCGTTGTGGTTCTGACCCTGAAATTTACTATGCAC
CTTTTCAAGCTCAAAGACTCATGGTGCTTCTTCTGGGATGGTATTTATATCC

Sequence 1746

GTGAACAGGNTATTGACTATGGTAACTTATTTTATTGAAGTTTTCAACCGGAAAAATAGT
AAGTGAATATGATACAACCTGTTATTTTCAGAACATATTTCTTTAGGGCTATTTAAAATA
ACCTTTTTAAAGGGCAAAAACCTTCAATTTGAGAGAACAATTCCTCTCCTCTGTGGGAA
ATATTGGCTGAGATTTGTATAGAATAAGAGACATGTATGTAAACATATATTTATATTGAG
CATAAGTCTACTGCAATCATGTACACATCTTAGCAAGACGAGAGGATTTTGTTTAGTCTT
TGTTTATGACTTCTACAGTTTCTGTATCTAGTGTTAAGTTGTAAGGAAAACTAAACAT
GCAATTTAAAGGTAACTTGATAACTATTTATGGAACATAAGCATACACCAATGGTTATT
TCTCACAGTTTTTCATGCGCATTTGTTTATTGTTTACTTGGATTAGGCTCATTAAAAACCA
TAATGCTGGTCACAATTAGAATGCTAATATTTGGGGAAGCTATGCAGAAAATATTT

Sequence 1747

CNTGTGTGCCATGTATACCTAACGGGAGTCCCGAGAAGACAGGAGAGAAAAAAGAAAGAA
ATAAAAAGAATATTTGAATTTAAAAATTGCTTGAAAATGTCTCAAATTTGATGAAAAATAT
TACTCTGCACATTCAACCCATGAACATAAGTTGTATAAAATCAAAAAGTTTCACACCAA
GGCGTGTCTAGCCAACTGTCAAAGCCAAAGACACAGAATCTTGAAAGCAGTGAGAGC
AAAGCAGACAAGGGATCCCCAATAGGATTAACAGCAGATTTCTCATCAGAAGCCATGCAA
GCCAGAAGGCTATGGGAGACATACTCAAATGCTGAAATAAAAGACTGTCAACAAACATT
TCCACATCCAGCAAAAATCAAAAACGAAGGAGAAATCTGTTGCATGTGAGCTGAATAGAA
TTTGTATTCTGCTGTTGTTGGATTGAAGTATCTTTAAATGTCAATTANATCAATTTG

Sequence 1748

CGATGGCAATACATGTACTCAGATAGTTACATCCCTATATAAAAAGTATGTTTACATTTA
AAAAATTAGTAGATAACTTCCTTTCTTTCAAGTGCACAATTCATTTTGACTTGAGTCAA
CTTTTGTTTGGACAAATTAAGTAAGGGAGCTGCCCAATCCTGTCTGATATTTCTTGAG
GCTGCCCTCTATCATTTTATCTTTCCCATGGGCAGAGATGTTGTAAGTGGGATTCTTAAT
ATCACCATTCTTGGGACTGGTATACATAAGGCAGCCGTGAACTGGAAAGTCATTTTGAT
GACTGATGTGATACATCCAGAGGTAAATGCATTTAAACATATTAAGTATTTGCCAAAG
ATACAATTTTCTTGCTGACATAAAAATCACACAAACAAGTCCCCCCCCAAACCACAACGT
CTCTCAAATAGCTTAAAAAAATTGAAAAACATTTTAGGATTTTCAAGTTTTCTAGATTTT
AAAAAGATGTTCAAGCTATTAGAGGGAATGGTAA

Sequence 1749

TABLE 1
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GCCCNTCCCGACCCTCCAGCTCATGGTGTCTGGGGCCTGCGGCTAGACTCTTGGAACATT
CTGGAACCTCTCTCCTTTCTGGCTGGGGCTCTGACCACAACTCCCCTCCAGGCTGCCCC
TGGGACATGGTGGTGATGTGGGTGCAGGAGCCAGTGTCTGTTGTCGGGACTCGCAAGTGC
CCTCATCACAGCCACCCCCACACGAGTGTCTCCCCAGTGCAGACTCAAGTTATGCTTGA
AATGAAAAAGTCTATCTGGTAGTGGGTAAACGTAGACCTGGCACTGTTCCACGCGGGCGC
CCCAAGCCTGCCACTCCTGTGTCCCTGCCTCCCTGGGCTCCCAGATAGGCACCACTGTA
TCCTCCAGCTCCTTCCTTCCTTCCCCAGGAACACGGAGGCCACCGAGGGGGCTGGGCC
ATCAGGAGGACACAGGCTGCAGCCTGGCACCCACCCCTCCATCTTCACCCACATGGAAG
ACTTGTCTTCAAC

Sequence 1750

GCGTCCGATTCTAAAAAATAAAAAAAAAAAAAAAAAAATTAATTGGGGTGCCTTTTTG
TTATAGTTTCTATTTTCTGTTTTGTAGGACAAGCTGCATTTTCTGTAAATATAGGTCTGG
ACTAAAGGATACATAAAGAATGCACAAAATGTCAACATCAGCAGAGATGCCAGATCTAT
TTATCTCTAAGTATATTTGAAGTGATTGCTGNTTATATGTTGTCATTTTAAATTGTGTG
TCAGTAAAGCTACCTGTAAAATTTAGTCCAAAAAATAAAGCTCTCAGGGAGACATGA
ATAAATCAATGAACATTAGAAAATAAATATAGATGCTTACCATTAACTACCACTCT
TAATATCCTTAAATTATGTGATATATAAGAGGACTGTTACTTTTTACTTTCTTTTTT
TTTTTTTGGCTTTGCTTTATTTATTTGGAGT

Sequence 1751

GGGCATGCTCATAGGCACAGCTGTTGGTCAGTATGCCAATAACATCACACTTTGGATCTT
TGCACTCACTGCAGGCATGTTCTCTATGTAGCCTTGGTGGATATGCTTCCAGAAATGTT
GCATGGTGATGGTGACAATGAAGAACATGGCTTTTGTCTGTGGGGCAATTCATCCTTCA
GAATTTAGGATTGCTCTTTGGATTTGCCATTATGCTGGTGATTGCCCTCTATGAAGATAA
AATTGTGTTTGACATCCAGTTTTGACCTTTCCAGTAATCACTGTTGATTACGAGAATGT
TACCATGCAGCTTTGCATCTGTTCTTGTACTGTATGCACATTGCTCAAAGGAAAGTCAG
TGGCTTGCCTACTTACAAGTTTCATAGATTTGAGCCTAACCCACAAGAGGCTGGTGCTTA
GTACTGTTTTCCCTGCACGTAGGGGTCTTTTAAAAATATAAAGCTTGTGATAAAGAGAGG
A

Sequence 1752

CTGGTTCAGCAGCCGCCACCCACCTCTGAGTCTGACCTGGAACCTGCCACAGATGGGCC
AGCCTCCGAGACCACTACCCTCAGCCCAGAGGCCACCACCTTTAATGACACCAGAATCCC
TGATGCAGCTGGTGGCACGGCCGGCGTGGGTACCATGCTTCTGTCTTTGGGATCATCAC
GGTGATAGGCCTGGCTGTGGCCTTGGTTTTGTACATCAGGAAGAAGAAGAGGCTGGAGAA
GCTACGCCACCAGCTCATGCCATGTACAACCTCGACCCACCGAGGAACAAGATGAGTT
GGAGCAGGAGCTGCTGGAGCATGGGCGGGACGCCGCTCTGTACAGGCTGCTACTTCTGT
GCAGGCCATGCAGGGCAAGACTACTCTGCCCTCCAGGGCCCACTCCAGAGACCCAGCCG
GCTTGGTGTTTACCCGATGTGGCCAATGCCATCCATGTGTGAGTGGCCTGGGACAAGC

Sequence 1753

GTCGCCCCGCGTCCGGTGCTCTCATGTCTCATCTCAGAGTTCCAGCTTATCAGAGGCATGTA
GCAGGGAGGCTTATCCAGCCATAACTGGGCTCTACCTCCAGCCTCCAGAAGTAATCCCC
AACCTGCATATCCTTGGGCAACCCGAAGAATGAAAGAAGAAGCTATAAAACCCCTTTGA
AAGCTTTCATGAAGCAGAGGAGGATGGGTCTGAACGACTTTATTCAGAAGATTGCCAATA
ACTCCTATGCATGCAAAACACCCTGAAGTTCAGTCCATCTTGAAGATCTCCCAACCTCAGG
AGCCTGAGCTTATGAATGCCAACCCTTCTCCTCCACCAAGTCCTTCTCAGCAAATCAACC
TTGGCCCGTCGTCCAATCCTCATGCTAAACCATCTGACTTTCACTTCTTGAAAGTGATCG
GAAAGGGCAGTTTTGGAAAGGTTCTTCTAGCAAGACACAAGGCA

Sequence 1754

TCGCCCCGCGTCCGGACTGATCATAAACCATGCTGGTATTGCACCTTCTGGAACATATGGG
CTTGAGAAAACCCCAAGGATCACTTCTCCTTGGCTTCTTATTTTCTTGAGGCAGGTGCG
ACGTTCTACCTGCCCAAGACGTGTGATATCAGCTTCTCAGATCCAGACGACCTCCTCAAC
TTCAAGCTGGTCATCTTGTCTGTGATGAGGGCTTCTACAAGAGTGGAAGTTTGTGTTGAG